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ABSTRACT

The purpose of this paper is to provide a detailed description of the Monitoring the Future research design, including sampling, data collection procedures, measurement content, and questionnaire format. Monitoring the Future is designed to assess the changing lifestyles, values, and preferences of American youth on a continuing basis. Since the project started there has been a dramatic change in attitudes and behaviors that the project has been able to monitor, particularly concerning drug use. One important reason is that the basic study design described in the initial paper has remained constant in its fundamental characteristics and this consistency in survey methods is seen as a key condition for successfully measuring change. From the outset, the project was designed with two interrelated components, an annual nationwide survey of high school seniors, and a periodic follow-up questionnaire mailed to subsamples of each class cohort. The project has monitored four kinds of trends: (1) changes common to all cohorts in a given historical period; (2) maturational changes or age effects which show up consistently in the longitudinal data; (3) changes from one graduating class to another; and (4) longitudinal changes reflecting the differential impacts of important post-high school environments and major role transitions. (Contains 96 references and 17 appendixes.) (JDM)

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THE MONITORING THE FUTURE PROJECT AFTER TWENTY-TWO YEARS: DESIGN AND PROCEDURES

Monitoring the Future Occasional Paper 38

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INTRODUCTION AND OVERVIEW

This occasional paper updates and extends earlier paper in this series (Bachman & Johnston, 1978; Bachman, Johnston & O'Malley, 1991a). Our purpose in this paper, as in the earlier ones, is to provide a detailed description of the Monitoring the Future research design, including sampling, data collection procedures, measurement content, and questionnaire format. Here, as before, we have tried to include sufficient information for others who wish to evaluate our results, to replicate aspects of the study, or to analyze data which we have archived.

Much has changed in the twenty-two years since the project was launched in 1974. Most notably, there have been dramatic changes in the attitudes and behaviors which the project was designed to monitor, particularly those involving the use of drugs. There also have been substantial additions to the study design and procedures, as we outline below and detail in subsequent sections. But perhaps most important is the fact that the basic study design described in our 1978 paper has remained constant in its fundamental characteristics, and we view this consistency in survey methods across the years as a key condition for successfully measuring change.

Basic Design Surveying High School Seniors and Young Adults

From its outset, the Monitoring the Future project was designed with two interrelated components: (1) annual nationwide surveys of high school seniors using group-administered questionnaires, and (2) periodic follow-up questionnaires mailed to subsamples of each senior class cohort. This design permits us to examine at least four kinds of trends or changes:

1. Changes common to all cohorts in a given historical period, i.e., secular trends or period effects;
2. Maturational changes or age effects which show up consistently in the longitudinal data from all graduating classes;
3. Changes from one graduating class cohort to another, i.e., enduring cohort differences; and
4. Longitudinal changes reflecting the differential impacts of various important post-high school environments (including college, military service, various types of employment, homemaking, unemployment) and major role transitions (marriage, pregnancy, parenthood).

We acknowledge, of course, that these several types of trends or changes, while easily distinguished in the abstract, are often intertwined in the real world, so that the analysis problems of separating one pattern from another are formidable. Nevertheless, this cohort-sequential design (Schaie, 1965; Labouvie, 1976) is uniquely powerful for addressing this complex of questions; it creates analysis possibilities that would not exist in either a longitudinal study that followed a single panel of respondents for a number of years, or a series of once-only cross-sections (e.g., surveys of each high school class without any longitudinal follow-up). Several analyses examining age, period, and cohort effects related to drug use (O'Malley, Bachman, & Johnston, 1984, 1988) provide concrete illustrations of how this design has permitted us to distinguish among the first three types of change listed above; other analyses (e.g., Bachman, O'Malley, & Johnston, 1984; Bachman, Johnston, & O'Malley, 1991b; Bachman et al., 1992; Bachman et al., 1997) provide examples of the fourth type of change; and a series of annual monographs (e.g., Johnston, O'Malley, & Bachman, 1997) also has assessed change, particularly of the first type.

Annual Surveys of High School Seniors. Each spring, beginning with the class of 1975, the project has surveyed about 16,000 to 18,000 seniors, located in 125 to 140 public and private high schools, and selected to provide a representative cross-section of high school seniors throughout the coterminous United States. Confidential questionnaires, usually administered during regularly-scheduled class periods, cover background and demographic characteristics, use of drugs, and a wide variety of other topics outlined later. Respondents are asked to provide their names and mailing addresses on forms which are then separated from the questionnaires (but linkable by code numbers accessible only to research staff). These address forms provide an opportunity for mailing one or more newsletters reporting project results; more importantly, they provide the opportunity to conduct follow-up surveys by mail which can then be linked to senior-year data.

Follow-Up Surveys of Young Adults. The Monitoring the Future design includes longitudinal follow-ups of graduates from the class of 1976 and each subsequent class, as shown in Figure 1. The initial design called for large-scale subsamples from each graduating class to be followed each year for the first five years after high school. In order to improve follow-up response rates, this design was modified after the first two years so that now each follow-up participant is asked to complete a survey only every other year, an "honorarium" check is included with the questionnaire, and prompts by mail and eventually by phone are used as necessary to encourage return of the questionnaires. Because of the additional costs of these procedures, the target numbers of follow-up cases from each class were reduced substantially. Given the resulting high rates of follow-up returns, as well as the importance of tracking drug use and its correlates further into young adulthood, the schedule of follow-ups was extended at several points so that it now reaches to fourteen years beyond high school, when respondents are in their early thirties.

These follow-up panels have become increasingly valuable as the biennial series of surveys of drug use and other experiences extends to cover all of young adulthood. However, the pace of change tends to diminish by the mid-thirties; also, some of the questionnaire items which are relevant for high school seniors and young adults become less central. Accordingly, after the seventh scheduled follow-up for each graduating class (when most respondents have reached age 31 or 32), we modified the follow-up strategy in two important ways: First, the next follow-up does not occur until 17 years after graduation (average age of 35), with any future follow-ups occurring at five-year intervals (see Figure 1). This schedule of less frequent data collection is intended to reduce respondent burden as well as research costs. Second, the questionnaire content was revised to eliminate less central items and include more extensive measurement of key events occurring between high school graduation and the mid-thirties (and perhaps eventually later). In sum, this "age 35 follow-up" is a reduced burden strategy for reaping further research dividends from the young adult panels.

Figure 1. OVERVIEW OF MONITORING THE FUTURE COHORT-SEQUENTIAL DESIGN, 1976-2002

Class	Year of Data Collection																						Proposed				
of:	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1976	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			35					40				
1977		18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			35					40			
1978			18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			35					40		
1979				18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			35					40	
1980					18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			35					40
1981						18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			35				
1982							18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			35			
1983								18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			35		
1984									18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			35	
1985										18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			35
1986											18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		
1987												18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
1988													18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1989														18	19	20	21	22	23	24	25	26	27	28	29	30	31
1990															18	19	20	21	22	23	24	25	26	27	28	29	30
1991																18	19	20	21	22	23	24	25	26	27	28	29
1992																	18	19	20	21	22	23	24	25	26	27	28
1993																		18	19	20	21	22	23	24	25	26	27
1994																			18	19	20	21	22	23	24	25	26
1995																				18	19	20	21	22	23	24	25
1996																					18	19	20	21	22	23	24
1997																						18	19	20	21	22	23
1998																							18	19	20	21	22
1999																								18	19	20	21
2000																									18	19	20
2001																										18	19
2002																											18

NOTE: Entries indicate modal age of respondents at data collection: 18 = base-year, in school 12th grade; 19 and older = follow-up, by mail.

Expanded Design Including Eighth and Tenth Grade Students

We outline later in this paper a number of factors which led to our choice of the senior year of high school as an optimal starting point for monitoring the attitudes, experiences, and behaviors of young adults. In general, our experiences during the past twenty-two years have confirmed that initial judgement. However, we also acknowledged at the outset that one key shortcoming of the design was that its coverage omitted those youth who left high school before the end of their senior year. A further limitation, of course, is that beginning with the senior year constrained our measurement of earlier events, particularly earlier use of drugs. In order to deal with these limitations, the Monitoring the Future project was expanded in 1991 to include nationwide surveys of students in the eighth and tenth grades.

Each spring, beginning in 1991, the project surveys about 16,000-18,000 eighth grade students located in about 180 schools, and about 16,000-18,000 tenth grade students located in about 130-140 schools, using questionnaires and procedures patterned after those used for the surveys of seniors.

SCOPE, PURPOSES, AND RATIONALE

The issues addressed in the Monitoring the Future project are broad in scope and of fundamental importance to the nation: views about personal lifestyles, confidence in social institutions, intergroup and interpersonal attitudes, concerns about conservation and ecology, behaviors and attitudes related to drug use, and other social and ethical issues. A major emphasis is placed on drug use and attitudes about drugs, both because use of drugs is itself a particularly serious problem among young people, and also because it is a symptom of other deeper problems and discontents.

Rationale for Annual Nationwide Sampling of High School Seniors

The study employs large-scale, nationally representative samples of high school seniors, obtained on a recurring annual cycle. Each of these aspects of the sample will be discussed in this section. First, however, we should note that for purposes of studying drug use, our choice of a "normal" population, rather than relying on institutional samples or records, reflects our interest in all types and stages of drug use. Our own findings and those of many others make it abundantly clear that the use of psychoactive drugs is widespread in the population. Studies of the general population are certainly no substitute for special in-depth examinations of drug addicts, drug overdose data, and the like; but it is equally true that such specialized information sources do not provide a complete picture of drug use or drug users, since for most users no institutional contact is involved.

Nationally Representative Samples. The use of nationally representative samples rather than local, state, or regional ones, reflects our conviction that we are dealing with issues that are national (indeed, international) in their scope. It had been necessary in the past to make guesses about national drug trends based on local data, because only local data were available. Since there are some substantial regional differences both in levels of drug use and trends in drug use (Johnston et al., 1997), and since much of the policy in the field is set at the Federal level, it continues to be desirable to select our respondents such that they represent the nation as a whole (and also provide data for large regional subgroups).

Senior Year as Starting Point. The choice of the senior year of high school as the point of our initial sampling and the starting point for our longitudinal data collections seems optimal for several reasons. First, the completion of high school represents the end of an important developmental stage in this society, since it demarcates both the end of universal public education and, for many, the end of living in the parental home. Therefore, it is a logical point at which to take stock of the cumulated influences of these two environments on American young people.

Second, the completion of high school represents the jumping-off point from which young people diverge into widely differing social environments. Environments such as college, business firms, military service, and the like, are generally thought to have new and important socializing effects. Measurements taken near the end of twelfth grade represent the state of each graduating class before entering these environments. By comparing these "before" measures with the follow-up or "after" measures taken over the years following graduation, we can assess many of the impacts of these different post-high school experiences.

But entering new environments is not the only important change which coincides with the end of high school. Most young men and women now reach the formal age of majority shortly before or after graduation. More important, the years following high school mark the assumption of full adult roles, including financial self-support, living away from parents, marriage and parenthood. Findings from the project have shown that a number of these role experiences have substantial impacts upon various forms of drug use (Bachman et al., 1984; Bachman et al., 1991b; Bachman et al., 1992).

Finally, there are some important practical advantages to building a system of data collections around samples of high school seniors. The last year of high school constitutes the final point at which a reasonably good national sample of an age-specific cohort can be drawn and studied with this degree of economy. The need for systematically repeated, large-scale samples from which to make reliable estimates of change requires that considerable stress be laid on efficiency and feasibility; the present design meets those requirements.

Omission of Dropouts from Senior Samples. One limitation of the samples of high school seniors is that they do not include in the target population those young men and women who drop out of high school before the last few months of the senior year. This excludes a relatively small proportion of each age cohort—between 15 and 20 percent (National Center for Education Statistics [NCES], 1996a,c)—though not an unimportant segment, since we know that illicit drug use tends to be higher than average in this group (Bachman, O'Malley, & Johnston, 1978; Johnston, 1973; Mensch & Kandel, 1988; National Institute on Drug Abuse [NIDA], 1991a).

For the purposes of estimating characteristics of the entire age group, the omission of high school dropouts does introduce certain biases; however, the low proportion of dropouts sets outer limits on the bias (Johnston & O'Malley, 1985; Johnston et al., 1997). For the purposes of estimating changes from one cohort of high school seniors to another, which has become the most important use of the descriptive statistics on drug use, the omission of dropouts represents a problem only if different cohorts have considerably different proportions who drop out. However, recently published government statistics indicate a great deal of stability in dropout rates since 1975 and neither we nor government demographers see any reason to expect dramatic changes in those rates for the foreseeable future (NCES, 1996b).

The effects of missing dropouts are discussed at greater length in Johnston and O'Malley (1985) and our annual reports on trends in drug use; the summary and conclusions from the most recent report (Johnston et al., 1997, pp. 303-304) bear repeating here:

> "In sum, while we believe there is some underestimation of the prevalence of drug use in the cohort at large as a result of the dropouts being omitted from the universe of the study, we think the degree of underestimation is rather limited for all drugs (with the possible exceptions of heroin, crack and PCP) and, more importantly, that trend estimates have been rather little affected. Short of having good trend data gathered directly from dropouts—an expensive and technically difficult research undertaking—we cannot close the case definitively. Nevertheless, we think the available evidence argues strongly against alternative hypotheses—a conclusion which was also reached by the members of the NIDA technical review on this subject held in 1982.
>
> ...the analyses provided in this report show that failure to include these two groups (absentees and dropouts) does not substantially affect the estimates of the incidence and prevalence of drug use" (Clayton & Voss, 1982).

Some may use the high school data to draw conclusions about changes in drug use for the entire age group. While we do not encourage such extrapolation, we suspect that the conclusions reached would be valid on the whole, since over 80 percent of the age group is in the surveyed segment of the population and since we expect that changes among those not in school are very likely to parallel the changes among those who are in school. Nevertheless, we recognize the value of periodically checking the results of the present monitoring system against those emerging from other data collection systems using different methods, such as household interviews. It is encouraging to note that when we have compared trend data from this study with trend data from interview studies, estimating levels of drug use for the same age groups, the findings have shown a high degree of similarity.

We should note here that although the samples of high school seniors do not include dropouts, the new samples of tenth graders and especially eighth graders omit relatively few of those who drop out. Thus these recent additions to the Monitoring the Future project provide opportunities for providing data on dropouts, as we discuss below.

Large-Scale Samples. The use of relatively large-scale samples for our base-year data collections from each graduating high school class has several advantages. Most important, many aspects of drug use constitute fairly rare events; in order to have sufficiently large numbers for analysis of such events, the initial sample must be quite substantial. Similarly, the accurate assessment of relatively small changes over time requires large-scale samples. A related advantage is that the smaller numbers of seniors sampled for inclusion in the follow-up surveys can be selected so as to over-represent heavy drug users. The relationship between base-year and follow-up samples is spelled out later; for present purposes it is sufficient to note that since the cost per respondent is a great deal higher in the follow-up data collections than in the base year ones, the use of large samples in the base-year in order to select smaller and more efficient follow-up samples is quite cost effective.

Another advantage of the large-scale samples is that they permit the use of several different but overlapping questionnaire forms, thereby substantially increasing the content which can be covered by the study and also reducing the tedium for respondents of an "all drug questionnaire." Because a common core of drug use items appears in all questionnaire forms (along with a common core of demographic items), such core dimensions can be related to any of the other questionnaire items irrespective of form. A further point about the use of large-scale samples for the senior year data collections is that it is actually easier in most schools to obtain large numbers of seniors than to select a small but representative subsample. Given that our base-year data collection procedures are highly cost effective (group-administered questionnaires scored automatically), the decision to use large samples of seniors has not substantially increased the overall cost of the study.

Annual Data Collection. The choice of an annual cycle of data collection, surveying each new senior class (rather than every second or third class, for example) has a number of administrative advantages in terms of stability in project staffing and success in maintaining school participation. More important, though, are the scientific and policy formulation benefits which derive from the fact that the annual cycle adds greatly to the sensitivity of the indicators. Clearly, a series of annual data collections provides a faster feedback system than a biennial or less frequent arrangement. We have found that we can reliably detect emerging trends from rather small changes; thus we do not need to wait for large shifts to detect them reliably. It provides further assurance, however, to be able to determine that a shift—even a statistically significant one—is confirmed by at least one measurement subsequent to the two which initially established its existence; an annual system provides such confirmation much faster than a biennial one (i.e., in two years versus four). The detailed data provided by annual measurement also permit fine-grained comparisons among trends. For example, we were able to observe that the rise in concern about the health consequences of regular marijuana use began a year or more earlier than the decline in actual marijuana use (Bachman, Johnston, O'Malley, & Humphrey, 1986; Johnston, 1985).

Finally, the annual cycle permits a more rapid measurement response when a troubling new drug problem emerges. The advent of "crack" is an excellent case in point: we were able to enter it into the spring 1986 measurement, soon after concern about it rose. Since neither the 1985 NIDA household survey of drug use nor the 1985 Monitoring the Future survey contained questions on crack, the country would have had to wait until late 1987 to get reliable national data on the spread of this serious problem, had we been in a biennial cycle.

Rationale for Annual Nationwide Eighth and Tenth Grade Samples

We noted above that a critical limitation of the Monitoring the Future surveys beginning with high school seniors was the omission of dropouts from the sample universe. That is surely a primary reason for extending the study to lower grades, but not the only one. In this section we discuss a number of the reasons for the surveys of lower grades.

First, however, we note that the surveys of eighth graders and tenth graders, like the ongoing surveys of high school seniors, are large-scale, nationally representative, and repeated on an annual basis. We spelled out in the previous section the rationale for these characteristics in the senior survey, and we think the arguments apply equally well to the surveys in lower grades: (1) Large-scale samples permit the measurement of rare events, the accurate assessment of relatively small changes, and the over-sampling of important subgroups for follow-up analyses. (2) The problems we are studying occur nationwide, and the assessment of trends in these problem areas can best be managed with nationally representative samples. (3) An annual cycle of data collection provides a prompt feedback system; moreover, the use of the same schedule for eighth and tenth grade surveys as is used for seniors permits a broadened range of comparisons in annual reports of drug trends.

More Complete Representation of Age Cohorts. School-based surveys of eighth grade students miss very few of those who are ages 13-14. Almost no dropping out of school occurs before the end of eighth grade, and thus it is safe to say that an eighth grade survey of the sort employed by Monitoring the Future includes virtually all early (or middle) adolescents in its sampling universe. The very small proportion who are seriously handicapped in reading ability are not covered by a survey which employs self-completed questionnaires, of course, but otherwise the eighth grade samples should provide good coverage of practically the whole age cohort — in contrast to the senior surveys, which miss those who drop out.

The surveys of tenth grade students sample adolescents two years later. They fail to include those who drop out early, of course; such losses are only moderate from a numerical standpoint because most dropping out occurs in eleventh and twelfth grade after individuals have reached age sixteen, but those who drop out earliest are arguably the most seriously troubled adolescents and thus do represent important limitations to the tenth grade samples. In sum, the tenth grade samples provide distinctly more complete representation of the age cohort than do the senior year samples, but not quite as complete as the eighth grade samples.

Sampling of Earlier Stages in Developmental Sequences. The eighth grade samples, focusing on students four years younger than high school seniors, tap into a distinctly different point in adolescent development. For example, problems such as cigarette smoking, which generally are well developed by the senior year, may only be getting underway in eighth grade. (Among all high school seniors who ever smoked on a *daily* basis, two-thirds did so only after eighth grade; however, most seniors who ever smoked at all had their first cigarette in eighth grade or earlier.) Thus the eighth grade samples provide a cross-section of younger adolescents who are at the threshold of engaging in all sorts of new behaviors, including problem behaviors.

The tenth grade surveys sample students after an important additional two years of growth and development, involving experimentation with a variety of adult-like roles and activities including drug use. Thus in several respects the tenth grade samples provide a useful "middle ground" between the eighth and twelfth grade samples — a way of tapping into a middle point in terms of developmental sequences.

MEASURES

In this section we present in some detail the measures used in the Monitoring the Future surveys of high school seniors and young adults, and we note the additional measurement areas included in the special surveys of adults at modal ages 35 and 40. Finally, we summarize the content and format of the new questionnaires used to survey eighth and tenth graders, beginning in 1991; this can be done rather briefly, since these new questionnaires are derived largely from the senior year surveys.

Overview and Conceptual Framework: Seniors and Young Adults

Our measures include a wide range of behaviors, attitudes, values, experiences, plans, concerns, and general lifestyle orientations. The base-year surveys of high school seniors are kept largely unchanged from year to year, thus permitting us to compare different graduating classes in their responses to the same questions. Similarly, much of the follow-up questionnaire content is kept identical to the base-year content to permit an assessment of longitudinal change.

For certain descriptive purposes it is useful to distinguish four broad areas of the measurement content:

1. "Monitored" Attitudes and Behaviors (repeated in base-year and follow-up data collections);
2. Background and Demographic Characteristics (measured in base-year only);
3. High School Experiences, Role Behaviors, and Satisfactions (measured in base-year only); and
4. Post-High School Experiences, Role Behaviors and Satisfactions (measured in follow-up only).

Figure 2 presents a schematic representation of these four areas of measurement. Note that the lower boxes on both the left and right sides of the figure are identical in content, representing the fact that the monitored variables are included in both base-year and follow-up questionnaires.

The arrows shown in Figure 2 represent at a very general level some of the causal connections that can be explored using the data collected from a single class or cohort. We assume that background and demographic variables will have an impact on the monitored variables measured in both the base-year and follow-up data collections (as shown by arrows a and b), and also upon post-high school experiences (arrow c). We expect that some of the attitudes and behaviors measured in the senior year of high school will predict (perhaps be causes of) post-high school experiences (arrow d), and they also surely will be strong predictors of later responses to the same questions (arrow e). Arrow f denotes the important impact we expect post-high school experiences to have on some of the attitudes and behaviors we monitor, but we also acknowledge (with arrow g) that in some instances the causal direction may be largely in the opposite direction. This conceptual framework is not a recipe for relational analyses; it simply indicates some of the major classes of relationships that can be examined within the longitudinal panels created for each senior class. Not shown in Figure 2 are (a) cross-cohort analyses, or (b) relational analyses which can be conducted using some monitored variables to explain other monitored variables (e.g., relating attitudes and beliefs about drugs to various patterns of drug use). These and other analysis possibilities are discussed in the section on Analysis Activities.

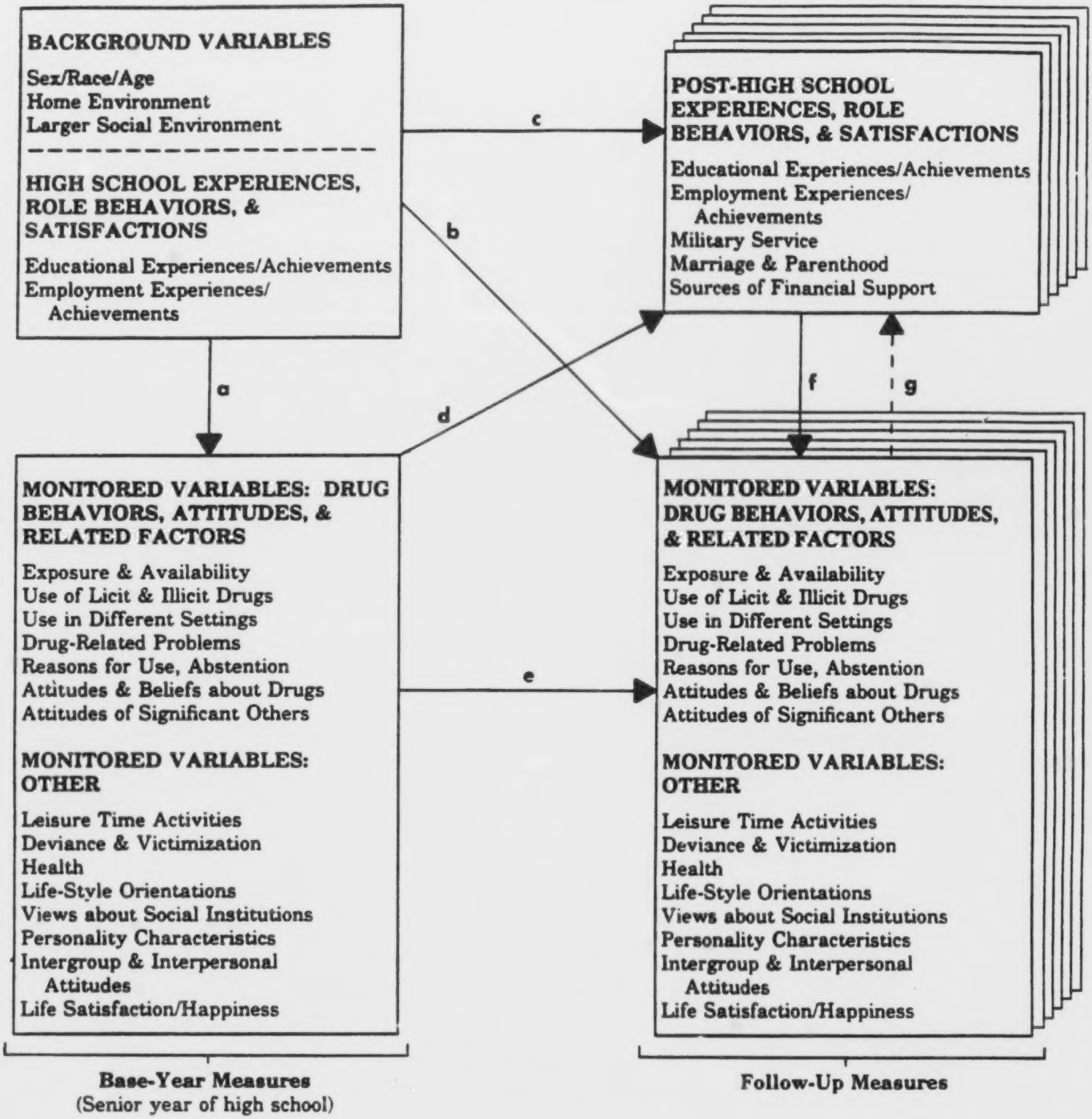
Outline of Questionnaire Content: Seniors and Young Adults

It is beyond the scope and purposes of this report to present a detailed listing of questionnaire content which appropriately would be classified into each of the categories in Figure 2. Instead, we present in Table 1 a more detailed outline of the major content areas shown in Figure 2. The table is organized according to the several broad areas of measurement content introduced above. Some general comments about each of these areas are offered below.

Monitored Variables: Drug Behaviors and Drug Attitudes. The measures of drug use, and drug-specific attitudes and beliefs, lie at the center of this system of monitoring. (They represent about half of the total space available in the most recent senior year and post-high school follow-up questionnaires.) As Table 1 indicates, the questionnaires include extensive usage measures for licit and illicit substances, plus attitudes about their use, beliefs about their harmfulness, and a host of other factors relevant to each. (The full list of the thirty classes and sub-classes of drugs is given in Table 2.)

It should be noted that this series of surveys encompasses more classes of drugs than any other recent or ongoing, large-scale epidemiological investigation; furthermore, this series provides much more detailed information about most drugs than any other study. These results are made possible by the large numbers of cases being surveyed, which in turn permits the division of a very large amount of substantive content relating to drugs into the five different questionnaire forms used throughout most of the study's history. (As discussed below, a sixth form was added in 1989, and some revisions of other forms were carried out subsequently; however, many of these changes were undertaken so as to include key drug measures in more than one form, and only a modest amount of new content material was introduced.)

Figure 2. CATEGORIES OF BASE YEAR AND FOLLOW-UP MEASUREMENT


BACKGROUND VARIABLES
Sex/Race/Age
Home Environment
Larger Social Environment
HIGH SCHOOL EXPERIENCES, ROLE BEHAVIORS, & SATISFACTIONS
Educational Experiences/Achievements
Employment Experiences/Achievements
POST-HIGH SCHOOL EXPERIENCES, ROLE BEHAVIORS, & SATISFACTIONS
Educational Experiences/Achievements
Employment Experiences/Achievements
Military Service
Marriage & Parenthood
Sources of Financial Support
a
b
c
d
e
f
g
MONITORED VARIABLES: DRUG BEHAVIORS, ATTITUDES, & RELATED FACTORS
Exposure & Availability
Use of Licit & Illicit Drugs
Use in Different Settings
Drug-Related Problems
Reasons for Use, Abstention
Attitudes & Beliefs about Drugs
Attitudes of Significant Others
MONITORED VARIABLES: OTHER
Leisure Time Activities
Deviance & Victimization
Health
Life-Style Orientations
Views about Social Institutions
Personality Characteristics
Intergroup & Interpersonal Attitudes
Life Satisfaction/Happiness
MONITORED VARIABLES: DRUG BEHAVIORS, ATTITUDES, & RELATED FACTORS
Exposure & Availability
Use of Licit & Illicit Drugs
Use in Different Settings
Drug-Related Problems
Reasons for Use, Abstention
Attitudes & Beliefs about Drugs
Attitudes of Significant Others
MONITORED VARIABLES: OTHER
Leisure Time Activities
Deviance & Victimization
Health
Life-Style Orientations
Views about Social Institutions
Personality Characteristics
Intergroup & Interpersonal Attitudes
Life Satisfaction/Happiness
Base-Year Measures
(Senior year of high school)
Follow-Up Measures

Note: See Table 1 for an expanded listing of variables under each broad category.

The variables in this large category of monitored drug behaviors and attitudes might be thought of in terms of the following subcategories:

(a) Descriptors of the pattern of drug using behavior, including frequency, quantity, recency, multiple concurrent use, multiple non-concurrent use, age at first use, etc.

(b) Descriptors of the social and physical setting in which drug use takes place, as well as the time of day. (These variables not only are of interest descriptively, but may prove useful in developing a more complex typology of drug users, when used in combination with variables in category (a).)

(c) Self-reported reasons for use, abstention, and termination.

(d) Self-reported consequences (or problems) resulting from drug use, including effects on automobile accidents, other impaired driving, various interpersonal relationships, cognitive functioning, emotional stability, energy level, physical health, school performance, work performance, trouble with the police, etc.

(e) Aspects of the immediate social environment likely to contribute to respondent's use (and attitudes about use) of various drugs, including extent of exposure to use, friends' use, availability, parental awareness of use, perceived attitudes of friends and parents, perceived norms among the high school student body regarding drug use, perceived social connotations (or labeling) of drug use by friends, exposure to drinking and drug use at parties, and exposure to drug education in the school curriculum.

(f) Various attitudes and beliefs regarding drugs and drug-control policies, including the perceived harmfulness of various drugs, personal disapproval of their use, the connotations associated by the respondent with being a user of different types of drugs (including cigarettes), preferences regarding legal status for different drugs, etc.

Monitored Variables: Other Relevant Social Values, Attitudes, and Behaviors. The other monitored variables that are measured repeatedly include views about personal lifestyles, confidence in social institutions, intergroup and interpersonal relations and attitudes, and additional social and ethical issues. Taken together, these variables comprise roughly another 30 percent of total questionnaire space. Many of these dimensions are related to the changing life experiences of young adults in America, and many have been shown to relate—directly or indirectly—to changing patterns of drug use.

We monitor some lifestyle measures known to be connected to the use of certain drugs, and others that we hypothesize to be related. Therefore, one potential product of this research may be the identification of some new attitude/belief structures which are of relevance to understanding drug behaviors. Also, many of the variables which are repeatedly measured are not hypothesized to fall into lifestyle orientations, but nevertheless are considered important as predictors and/or consequences of use. The fact that they are labeled "monitored" variables has more to do with the periodicity of their measurement than with their position in the causal scheme. A number are known or hypothesized predictors of use (e.g., self-esteem, having a job) while others are hypothesized consequences of use (e.g., somatic symptoms, other health symptoms, accidents, importance placed on various life goals).

It is not possible, nor would it be appropriate, to devote the same level of data collection effort to each of these areas as we devote to drug use and attitudes. Our strategy has been to make use of multiple questionnaire forms in which basic drug use measures are included for all respondents, but the other monitored topics (including attitudes, beliefs, and perceptions about drugs) now are spread out among six different subsamples (with some sets of drug-related items appearing on more than one of the six questionnaire forms). The net effect of this strategy is to permit a much more extensive measurement of both the drug variables and the non-drug variables than would otherwise be feasible.

Background Variables. A number of background dimensions are measured in the initial data collection, including sex, race, age, parental education (an indicator of socioeconomic level), region, and urbanicity. The importance of these factors to the various types of drug use under study has been carefully documented for the period 1975-1979 (Bachman, O'Malley & Johnston, 1980; Bachman, Johnston & O'Malley, 1981); and these analyses have been extended through 1986 (Bachman, O'Malley, & Johnston, 1986) and more recently through 1989 (Bachman et al., 1990; Wallace & Bachman, 1991). Their importance as control and conditioning variables in most multivariate analyses is self-evident.

Experiences, Role Behaviors, and Satisfaction in High School. A number of measures of school performance and adjustment are included here, since their connection with the use of illegal drugs and with other delinquent behavior has been demonstrated by our own earlier research (Bachman, 1970; Bachman, Green, & Wirtanen, 1971; Johnston, 1973; Bachman et al., 1978; Johnston, O'Malley, & Eveland, 1978) and confirmed by more recent analyses with Monitoring the Future data (Bachman et al., 1980; Bachman, O'Malley, & Johnston, 1981; Bachman et al., 1986; Bachman, Schulenberg, O'Malley, & Johnston, 1990; Schulenberg, Bachman, O'Malley, & Johnston, 1994). Also included here are measures of the school social environment (peer norms, bases of peer status, student-teacher relations, counselor contact), student composition (in terms of sex, race, socioeconomic level, etc.), structural features of the school (size, curricular composition, drug use prevention courses), curriculum of the student, behavior of other students (delinquency, victimization, absenteeism, drug use), and so on.

While still in high school, a substantial proportion of American young people hold down paying jobs (Bachman, Bare, & Frankie, 1986; Bachman, Johnston, & O'Malley, 1981; Cole, 1980). Further, while it has generally been presumed by educators that such work would have a constructive influence on young people (Coleman et al., 1974), our own work and that of others has brought this assumption very much into question (Bachman, 1983; Bachman, Johnston, & O'Malley, 1981; Bachman & Schulenberg, 1991, 1993; Cole, 1980; Greenberger & Steinberg, 1979, 1986). Thus the measures of hours worked and earned income during senior year, which also are contained in the present study, can be treated not only as dependent variables in relation to drug use (following the anomie and impaired social performance hypotheses) but also as independent variables predictive of drug use. Total income from all sources is also measured.

Table 1. MEASUREMENT CONTENT

MONITORED VARIABLES: DRUG BEHAVIORS, ATTITUDES, & RELATED FACTORS

EXPOSURE AND AVAILABILITY (for various drugs)

- Exposure to people who were using
- Exposure at parties, specifically
- Proportion of friends using*
- Perceived availability*

USE OF LICIT AND ILLICIT DRUGS
(See Table 2 for list of specific classes)

- Lifetime prevalence and frequency of use*
- Annual prevalence and frequency of use*
- Monthly prevalence and frequency of use*
- Quantity consumed (selected drugs)*
- Indirect measures of quantity used per occasion (i.e., degree & duration of highs)
- Mode of administration (selected drugs)
- Injection of any drug for non-medical use*
- Patterns of multiple drug use: concurrent
- Patterns of multiple drug use: not concurrent
- Age at first use*
- Duration of daily use (marijuana only)
- Attempts to quit*
- Felt need to quit or cut back
- Expected future use*
- Prescribed use of psychotherapeutic drugs
- Use of over-the-counter psychoactives

FREQUENCY OF USE IN DIFFERENT SETTINGS (various drugs)

- While alone
- With a few friends
- At parties*
- With spouse/date
- With adults
- At home*
- At school*
- In a car*
- During the daytime

DRUG-RELATED PROBLEMS (various drugs)

- Checklist of 15 problems
- Having "bad trips"
- Auto accidents and violations under the influence
- Driving after drinking

REASONS FOR USE, ABSTENTION, AND TERMINATION OF USE (various drugs)*

ATTITUDES AND BELIEFS REGARDING THE USE OF VARIOUS DRUGS

- Perceived harmfulness*
- Personal disapproval*
- Social connotations attached to use*
- Preferred legal status (various drugs)
- Preferences re. marijuana decriminalization

ATTITUDES OF SIGNIFICANT OTHERS (regarding various drugs)

Parental awareness of use
Perceived friends' disapproval of use
Perceived status attached to use in the school
Perceived social connotations of use by respondent's acquaintances
Perceived pressure to use*

EXPOSURE TO DRUG EDUCATION

Types*
Rated helpfulness*
Effect on use*

EXPOSURE TO DRUG TREATMENT

Inpatient
Outpatient

EXPOSURE TO DRUG TESTING

pre-employment
post-employment

EXPOSURE TO ANTI-DRUG ADS*

Level of recalled exposure
Credibility of ads*
Judged impact of ads*

MONITORED VARIABLES: OTHER

LEISURE TIME ACTIVITIES (patterns and frequency of activities)*

PARTICIPATION IN ORGANIZED ACTIVITIES

In school
Out of school

DELINQUENT AND OTHER DEVIANT BEHAVIOR

Theft and vandalism*
Interpersonal aggression*
Driving violations and accidents
Drunk driving and exposure to drunk driving*
Violations and accidents under the influence of various drugs

VICTIMIZATION

Theft and vandalism*
Interpersonal aggression*

HEALTH: HABITS, SYMPTOMS, AND MEDICAL CARE CONTACT*

HEIGHT, WEIGHT*

LIFE-STYLE VALUES, ATTITUDES AND BEHAVIORS

Educational values, preferences, expectations, and experiences*
Vocational values, occupational aspirations, and experiences*
Material life style, aspirations, and expectations*
Family structure, marriage, and sex role preferences and experiences*
Religious affiliations, practices, and views*
Political affiliations, participation, and views
Views on family planning and population
Views on conservation and pollution control
Distributive equity: Concepts of equity and sharing of resources
Concern with social problems facing the nation
Values, attitudes, and expectations about social change*
Counter-culture orientation
Health and fitness orientation
Deviance proneness

*The asterisk indicates that these items appear on the 8th & 10th grade questionnaires, in addition to the 12th grade.

Table 1. MEASUREMENT CONTENT (continued)

VIEWS ABOUT ALIENATION FROM SOCIAL INSTITUTIONS

- Educational system and its opportunities
- Economic system and its opportunities
- Government and political leadership
- Military system
- Other social institutions

INTERGROUP AND INTERPERSONAL RELATIONSHIPS AND ATTITUDES

- Inter-generational relations
- Race relations
- Sex discrimination
- Radius of concern for other people

LIFE SATISFACTION/HAPPINESS

- Global satisfaction*
- Specific satisfactions (13 domains)

ADDITIONAL PERSONALITY CHARACTERISTICS

- Self-esteem*
- Internal control (locus of control)
- Proneness for risk-taking*
- Loneliness*
- Depression
- Optimism
- Trust in others*
- Life goals

BACKGROUND VARIABLES (Base-year data collection only)

PERSON CHARACTERISTICS

- Sex*
- Race/Ethnicity*
- Age*

HOME ENVIRONMENT

- Parental education*
- Household composition*
- Size of family of origin
- Birth order
- Mother working*

LARGER SOCIAL ENVIRONMENT

- Region*
- Urbanicity (senior year)*
- Urbanicity while growing up

SCHOOL EXPERIENCES, ROLE BEHAVIORS, AND SATISFACTIONS
(Base-year data collection only)

EDUCATIONAL EXPERIENCES

- Grades in school[*]
- Self-concept of intelligence and school ability
- Curriculum[*]
- Satisfaction with school experiences[*]
- Absenteeism & cutting classes[*]
- Perceptions of school characteristics
- Selected school characteristics (derived from aggregated data)[*]
- Victimization in school[*]
- History of being held back[*]

EMPLOYMENT EXPERIENCES

- Pay[*]
- Hours worked[*]
- Nature of job held[*]

POST-HIGH SCHOOL EXPERIENCES, ROLE BEHAVIORS, AND SATISFACTIONS
(Follow-up data collection only)

HOME AND LARGER ENVIRONMENT

- Region
- Urbanicity
- Household composition
- Type of dwelling

EDUCATIONAL EXPERIENCES

- College attendance
- 2 or 4 year institution
- Size of school
- Academic performance (grades)
- Field of study (academic major)
- Satisfaction with educational attainment/experience

EMPLOYMENT EXPERIENCES

- Pay
- Type and status of job
- Organizational setting
  - Type
  - Size
- Unemployment experiences
- Job satisfaction

MILITARY SERVICE

- Pay
- Rank

MARRIAGE AND PARENTHOOD

- Marital/engagement status
- Pregnancy
- Number of children

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[*] The asterisk indicates that these items appear on the 8th & 10th grade questionnaires, in addition to the 12th grade.

Table 2. CLASSES OF DRUGS INCLUDED IN THE STUDY[1]

- Cannabis[*], plus
    - Marijuana, specifically
    - Hashish, specifically
- Hallucinogens, including
    - LSD[*], specifically
    - Hallucinogens other than LSD[*]
    - PCP, specifically
- Sedatives, including
    - Barbiturates[*], specifically
    - Methaqualone, specifically
    - Rohypnol[*], specifically
- Tranquilizers[*]
- Amphetamines[*], plus
    - Crystal Methamphetamine ("Ice"), specifically
    - MDMA ("Ecstasy")
- Cocaine[*], plus
    - Crack[*], specifically
    - Powder cocaine, specifically
- Heroin[*]
- Narcotics other than Heroin[*]
- Inhalants[*], plus
    - Amyl and Butyl Nitrites, specifically
- Alcohol[*], plus
    - Beer[*], specifically
    - Wine, specifically
    - Wine Coolers[*], specifically
    - Hard Liquor, specifically
- Cigarettes[*]
- Smokeless Tobacco[*]
- Anabolic Steroids[*]
- Over-the-Counter Psychoactive Substances, including
    - Diet Aids
    - Stay-Awake Stimulants
    - "Look-Alike" Stimulants

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[1] All classes are included in twelfth grade and follow-up questionnaires except for Methaqualone, which is included only in one twelfth grade questionnaire form.

[*] Included in eighth and tenth grade questionnaires.

Included in the base-year questionnaires are certain measures of interpersonal relationships, particularly with parents. Perceived consistency in parent-child attitudes is measured in a number of domains. In addition, there are measures of serious fighting with parents, and satisfaction with relationships with parents. There is also a measure of proportion of time spent with adults over 30.

Post-High School Experiences, Role Behaviors, and Satisfactions. Social environments such as college, military service, civilian employment and living arrangements, as well as role responsibilities involved in marriage and parenthood, all are known to be linked to patterns of drug use and attitudes (Bachman et al., 1978, 1984; Johnston, 1973; O'Donnell, Voss, Clayton, Slatin, & Room, 1976). It seems likely that such areas of post-high school experiences will continue to influence, and be influenced by, drug use and attitudes—although there is little reason to suppose that the patterns of relationship will remain altogether unchanged. Thus, for each of the areas noted above, we measure key experiences during the years following high school.

Measures of adjustment and attainment in these environments (pay, grades in college, college completion, satisfaction, unemployment) have been included both as potential consequences of drug use and as potential causes. The quality of interpersonal relationships with key others in the respondent's life (spouse, children, parents, older adults, friends) are also measured, for similar reasons. Finally, some detailed features of the major social environments in which the respondent is located are measured, such as size and type of school attended, major field of study, size and type of employing organization, educational and employment status of spouse, number and age of children, type of dwelling in which respondent resides, etc. All of these measures provide opportunities for defining important subgroups to be characterized separately in terms of drug use and other behaviors.

Relative Emphasis Assigned to Different Content Areas. We noted parenthetically that about half of the total space in the senior and post-high school questionnaires is devoted to items which deal explicitly with drugs (including behaviors, perceptions, and attitudes). About 20 percent of the total space is devoted to background variables in the case of base-year questionnaire, and to post-high school experiences in the case of follow-up questionnaires. The remaining space is devoted to questions monitoring other relevant social values, attitudes, and behaviors.

It may be useful at this point to spell out why this study monitors many variables which do not deal explicitly with drugs. The rationale has both a substantive side and a practical side.

From a substantive standpoint, many of the monitored variables are obvious and known correlates of drug behaviors (e.g., social and political alienation, delinquency, religiosity), and their inclusion permits a continuous examination of the absolute and relative importance of their association with drug use over time. (We use the word association, advisedly, since the nature of their connection to drug use runs the gamut from cause to consequence to covariate having a common cause.) Others of the monitored variables also are likely to show important associations with drug use, even though some such associations have not been demonstrated (or even hypothesized) in prior studies of the correlates of drug use. Monitoring these several factors in the dynamics of drug use can provide a better understanding of them not only in a cross-sectional sense, but also in terms of their importance across a particular part of the life cycle and across a particular historical period (e.g., Johnston & O'Malley, 1978). Further, we expect that various lifestyle orientations and social and political attachments (or detachments) will show shifting relationships with drug use. Thus, in addition to providing a better understanding of things as they are, the monitoring of these variables may provide leading indicators of things to come.

Still another substantive rationale for this study is monitoring change along a number of dimensions (other than drug use) which may be subject to fairly rapid social change; doing so provides a richer context for assessing the relative degree of turbulence in the area of drug use. Clearly, drug use and related attitudes have changed enormously over the past two decades, and more change is expected. It will enrich our understanding of such changes if we can contrast them with changes (similarly measured) in attitudes and behaviors related to jobs, citizenship, marriage, parenthood, delinquency, and so on.

There are also important practical advantages to including some questionnaire content that extends beyond drug use and closely related topics. Our experience clearly indicates that in surveying a "normal" or representative cross section of youth, the best way to gather substantial amounts of information about drug use and explicitly drug-related factors is to embed those topics into a broader set of issues of concern to youth. Entrance into schools, cooperation by teachers, and both initial and follow-up participation by students are all greatly enhanced by being able to present a study that is a genuinely broad exploration of the lifestyles and values of youth, rather than simply a study of youth and drugs. Even with the breadth of coverage provided in our questionnaires, we still find a few respondents and school officials who object to the extent of drug emphasis; however, such reactions are relatively infrequent. Much more frequent are positive responses about the range of interesting and important topics that are covered. Our high rate of return on follow-up questionnaires is an additional indication that young people find the research worth their effort.

Finally, it also should be noted that in addition to primary funding from the National Institute on Drug Abuse, additional funding has been obtained from a number of other sources (e.g., the Department of Education, the National Institute on Alcohol Abuse and Alcoholism, the National Institute of Education, the National Institute on Mental Health, the National Science Foundation), and more of such funding will be sought in the future, to support analyses of those aspects of the data which do not fall strictly within the realm of drug related research. Thus when we tell school officials and students that our research deals with a wide range of issues important to youth, that is indeed a statement of fact.

Questionnaire Organization and Format: Seniors and Young Adults

Six Questionnaire Forms. There are presently six different questionnaire forms used in base-year surveys of high school seniors, and a matched set of six forms used in follow-up surveys of graduates (five forms were used prior to 1989). The use of multiple forms is made possible by the fact that we survey a large number of high school seniors in each base-year data collection; it is made desirable by the fact that we wish to monitor a good many more variables than can be covered in a single questionnaire requiring only one class period to complete. One major advantage of keeping the administration within the confines of a single class period is that the disruption of the school's schedule is minimized; thus, a higher proportion of schools are willing to participate. Second, a 45 to 50 minute questionnaire has a better chance of maintaining respondent involvement than a longer one, particularly during the follow-up phase.

We will not review here the differences in questionnaire content from one form to another; the complete content of the senior surveys is included in an annual series reporting univariate and selected bivariate response distributions for all questionnaires (e.g., Bachman et al., 1991b). It is sufficient for present purposes to note that Form 1 deals in greater detail with drug use and reasons for drug use than does any of the remaining forms. Because these detailed questions about drug use require more space than most other questions, Form 1 requires more pages (but generally does not take longer to complete). Forms 2 through 6, both base-year and follow-up, are 12 pages long; Form 1 is 20 pages long in the base-year version, and 16 pages long in the follow-up.

Matching Base-Year and Follow-Up Forms. All respondents selected for longitudinal study are sent follow-up questionnaires which match their base-year forms. Thus, in effect, for each of the classes of 1976 through 1988 there are five parallel longitudinal panels, corresponding to Forms 1 through 5; for the classes of 1989 onward there are six.

Advantages and Limitations of Multiple Forms. The major advantage of the use of multiple forms is that it enables much greater measurement coverage. A corollary advantage is that the many questions about drug use, drug attitudes, drug availability, and so on can be spread across several forms to avoid the serious problems of respondent fatigue and boredom which are endemic to drug research generally, and which would be extreme in the case of this study, which has so much instrumentation about drugs.

The use of multiple forms does add some complexities at the analysis stage, since not all variables in the study are measured on the same set of respondents; thus, not all can be included in the same multivariate analyses. However, we believe this problem is limited. First, there were extensive efforts to minimize it during the initial design of the questionnaires, such as: (a) the inclusion of the major dependent variables dealing with drug use in all questionnaires, (b) the inclusion of the most obvious control or moderating variables in all questionnaire forms (these include measures of demographic and family background characteristics, plus certain measures of school and work status), and (c) the inclusion in the same questionnaire of other factors which we felt a priori should be examined together. Second, the new Form 6 introduced in 1989 was built primarily by selecting key drug-related items from other questionnaire forms in order to have them appear in the same form for purposes of correlational analyses (and also to increase the numbers of cases by having these items appear in two out of six forms rather than just one out of five). Third, additional revisions took place in 1990 so that four of the six questionnaire forms all now include measures of (a) perceived risk, (b) disapproval, and (c) friends' use of cigarettes, alcohol, marijuana, and cocaine, as well as (d) perceived availability of the illicit drugs marijuana and cocaine. The potential for correlational analyses involving drug-related perceptions and attitudes thus has been expanded substantially.

Questionnaire for Seventeenth Year Follow-Up (Age 35). We noted earlier that we end the biennial sequence of follow-ups after the seventh such survey (which occurs 13 or 14 years after the senior year, at modal ages of 31 or 32). At 17 years after graduation (modal age 35), we then survey the full retained follow-up samples (and obtain responses from more than 1500 out of the originally targeted 2400). A similar instrument will be used to survey these respondents five years later, at modal age 40. These "age-40" surveys will begin in 1998.

Several broad parameters of the age 35 survey can be outlined at this point. First, we use only a single age 35 questionnaire rather than multiple forms, which means that much of the material spread across the six different forms currently used for the age 19-32 follow-ups is not included in this new questionnaire. Second, we continue to include the core measures of drug use which currently appear in all questionnaire forms, thereby ensuring the ability to extend further the analysis of trends and patterns in drug use. Third, some key drug perception and attitude items are included (e.g., the most important of those which now appear in most of the base-year and follow-up questionnaire forms). Fourth, we developed new questionnaire content particularly suited to those in their mid-thirties.

The new questionnaire content involves some retrospective data to "fill in blanks" in the cumulated panel data record (e.g., fairly rapid shifts in marital status which may not have been detected by follow-up "snapshots" every two years). It includes information about spouses and information about children. It includes fairly extensive information about current employment. Each of these new content areas holds promise for analysis in conjunction with the histories of drug use accumulated from the senior year survey plus the seven post-high school surveys.

The content material outlined above was adapted successfully to the optically scanned questionnaire format used throughout the Monitoring the Future study — a format very familiar to panel respondents who have completed eight prior questionnaires. Some special coding by project staff is necessary before machine scanning; however, the methods (mailed optically scanned questionnaires, with continued guarantees of confidentiality) are generally quite similar to the current (age 19-32) post-high school surveys.

Content and Format of Eighth and Tenth Grade Questionnaires

Before initiating the eighth and tenth grade surveys in 1991, it was necessary to make several broad decisions concerning questionnaires. The first decision was whether the senior year questionnaires could be used, with virtually no changes, in surveys of lower grades; we decided against that for a number of reasons, including our judgment that the questionnaires for lower grades should be somewhat shorter and less complex than those administered to seniors.

Given that there would be new and at least somewhat different questionnaires used for the lower grades, we then considered whether the questionnaires for eighth graders needed to be different from those for tenth graders. Here we felt that any differences would not be worth the additional costs and complexities; in effect, we decided that questionnaires designed to be workable for eighth graders would also serve quite well to survey tenth graders.

Next, we had to decide to what extent the new eighth/tenth grade questionnaires would parallel the senior year questionnaires in format and content. Our general decision was to use items identical to those in the senior surveys whenever possible, but not to attempt the same breadth of coverage. We discuss below some of the reasoning behind this decision, and we also spell out many of the specific characteristics of the eighth/tenth grade questionnaires.

Questionnaire Length and Difficulty. The senior year questionnaires were developed and refined so as to occupy a full class period. Our goal for the eighth/tenth grade questionnaires was to do the same, but we recognized that some students in eighth grade (and, to a lesser extent, tenth grade) would be more limited than seniors in their reading skills, and thus would require questionnaires a bit shorter and with lower difficulty levels. We aimed to have the eighth/tenth grade questionnaires have 10-20 percent less questionnaire material (i.e., fewer items) than the senior questionnaires. (The new questionnaires still cover 12 pages, but less densely than the senior surveys.) We also decided that some items in the senior surveys which asked relatively complex questions would be above the difficulty level of some eighth (or tenth) grade readers, and thus should not be considered for inclusion.

Number of Questionnaire Forms. We discussed in a previous section the advantages and limitations of multiple forms as related to the questionnaires for high school seniors and young adults. Although the same basic issues were relevant to our decision concerning the eighth/tenth grade questionnaires, several considerations led us to a distinctly different outcome. Specifically, the eighth/tenth grade questionnaires involve only two forms, and the majority of the material (the first two-thirds) is identical across those two forms.

The primary consideration leading to fewer forms was that there was a large amount of material judged essential for inclusion in all forms, leaving rather little space for "form-specific" items. Our decision to reduce the overall number of questionnaire items, coupled with the need to cover all of our basic measures of drug use and demographic material, left us with less space available for other material. Moreover, the importance of being able to conduct correlational analyses among drug-related measures, a consideration which prompted the revisions of the senior and follow-up forms in 1989 and 1990, argued for including many drug-related measures on a single form, leaving still less room for other material.

Content Covered. Nearly all of the items used in the eighth/tenth grade questionnaire forms were selected (usually unchanged) from the senior year forms. Since we covered the conceptual framework and content of the senior questionnaires in detail above, it is unnecessary to repeat the material here. Instead, we have noted in Tables 1 and 2 those variables which appear also in the eighth/tenth grade forms. In general, most of the monitored variables having to do with drugs (own use, friends' use, perceived risks, disapproval, etc.) are included (representing a bit more than half of total questionnaire space), along with most of the background variables and measures of educational and employment experiences. Coverage of the "other" monitored variables, for reasons discussed above, is more limited in the eighth/tenth grade forms.

Use of Items from Senior Surveys. Our decision to base most of the eighth/tenth grade questionnaire content directly on the senior surveys resulted from several considerations. Most obviously, of course, we considered it preferable to be able to extend our descriptions of high school seniors and adult graduates down four years, with as much measurement comparability as possible. A closely related consideration is that we have by now carried out a considerable amount of correlational analysis work, which among other things has demonstrated the analytic value of the senior survey measures. Still another consideration is the fact that many of the Monitoring the Future items dealing with drug use and drug-related values and attitudes have been incorporated in other surveys and employed successfully with students as young as seventh and eighth graders. In particular, most of the items included in the present eighth/tenth grade surveys have been used to survey eighth, tenth, and twelfth grade students in a great many school districts throughout the State of Michigan, thereby providing a large-scale "pilot testing" of these items in lower grades. In sum, we opted to develop the eighth/tenth grade questionnaires largely as subsets of the items used in the senior surveys in order to heighten comparability across the several samples and because there had been successful experiences with these items when used in other surveys over a fairly wide age range of students and graduates.

Pretesting of Eighth/Tenth Grade Questionnaires. Although the questionnaire content and survey procedures used for eighth and tenth grade students were adapted closely from the high school senior surveys, we still considered it necessary to carry out some pretesting of the forms and procedures. Draft questionnaires were administered in several classrooms of eighth grade students, plus a small group of tenth grade students. (The greater emphasis on eighth graders was based on our assumption that whatever worked for eighth graders would also prove acceptable to tenth graders). The completed questionnaires, plus "post-mortem" discussions, led to a small number of revisions in items. Additionally, the discovery that most respondents finished early, and that they considered the questionnaires too heavily focused on drugs, led us to add some non-drug material at the end of the questionnaire forms. As a final step, the revised questionnaires were reviewed by the small group of tenth grade students who had completed the earlier draft version.

SAMPLING AND DATA COLLECTION PROCEDURES

In this section we spell out the sampling and data collection procedures for the annual surveys of high school seniors, the follow-ups of high school graduates, and the surveys of eighth and tenth graders. The measurement instruments employed in each of these surveys are self-completed questionnaires using closed-ended items and are designed for optical scanning. Information about questionnaire content and format is provided separately in the section on Measures.

Base-Year Data Collections from High School Seniors

The design involves data collections from high school seniors during the spring of each year, beginning with the class of 1975. As indicated in Figure 1, each such data collection represents the start of a panel study of that year's high school class. Thus we refer to each senior class survey as a base-year data collection. (Figure 1 begins with the class of 1976, because we did not include the class of 1975 in follow-up surveys after 1977.)

Samples of Seniors. The base-year data collection each year takes place in approximately 110-120 public high schools and 15-20 private high schools, selected by the Sampling Section of the Survey Research Center to provide an accurate cross section of high school seniors throughout the 48 coterminous states. The sampling procedure is multi-stage (Kish, 1965) as follows: Stage 1 is the selection of particular geographic areas, Stage 2 is the selection of one or more high schools in each area, and Stage 3 is the selection of seniors within each high school.

Stage 1: Geographic Areas. The geographic areas used in this study are the primary sampling units developed by the Sampling Section for use in the Survey Research Center's nationwide surveys. These currently consist of 108 primary areas throughout the coterminous United States. In addition to the 28 largest metropolitan areas, containing about 36 percent of the nation's population, 80 other primary areas are included: 16 in the Northeast, 20 in the North Central area, 32 in the South, and 12 in the West.

Stage 2: Schools. In the major metropolitan areas two or more high schools often are included in the sampling design; in most other sampling areas a single high school is sampled. In all cases, the selections of high schools are made with probability proportionate to size of senior class. The larger the senior class (according to recent records), the higher the selection probability assigned to the high school. (For a discussion of this procedure and its advantages, see Kish, 1965, pp. 220f.) If a sampled school is unwilling to participate, a replacement school is selected from the same geographic area, as discussed in the later section on Representativeness and Validity.

Stage 3: Students. Within each selected school, up to about 350 seniors may be included in the data collection. In schools with fewer than 350 seniors, the usual procedure is to include all of them in the data collection. In larger schools, a subset of seniors is selected either by randomly sampling classrooms or by some other random method that is convenient for the school and judged to be unbiased. All respondents in a school are assigned a sample weight which takes account of variations in the sizes of samples from one school to another, as well as the (smaller) variations occurring at the earlier stages of sampling.

The result of this three-stage sampling procedure each year is a nationally representative cross section of about 16,000 to 18,000 young men and women in the senior classes of about 125 to 140 high schools throughout the United States. Because the schools are located in the primary sampling units used by the Survey Research Center for personal interview studies, we are able to use local SRC field representatives to administer the questionnaires in the schools. The questionnaire administration methods are described below; what is important to note here is that the particular area sampling procedure used in Stage 1 makes possible this effective and highly cost-efficient field procedure.

It should be noted that each survey of seniors now employs six different questionnaire forms, as discussed below in the section on Measures. For those key drug use and demographic variables which appear in all forms, the full sample of about 16,000 to 18,000 seniors provides data each year. For other measures, the sample size averages around 2,700 seniors each year.

Two-Year Participation by Sampled Schools. One other important feature of the base-year sampling procedure should be noted. Each school (except for half of those in the initial 1975 sample) is asked to participate in two data collections, thereby permitting us to replace half of the total sample of schools each year. This means, for example, that the 1991 sample consisted of two distinct half-samples: roughly 65 schools which had already participated in the 1990 data collection before participating in 1991, plus another 65 schools which participated for the first time in 1991 and participated again in 1992. (Very few schools take part for one year and then decline to participate in the second.) One advantage of having schools participate for two years is administrative efficiency; it is a costly and time-consuming procedure to recruit a school, and a two-year period of participation cuts down that recruiting effort substantially. Another advantage is that whenever we notice an appreciable shift in scores from one graduating class to the next, we can check to be sure that the shift is not attributable to some differences in the newly sampled schools.

School Recruiting Procedures. Early during the fall semester an initial contact is made with each sampled school. First a letter is sent to the principal describing the study and requesting permission to survey seniors. The letter is followed by a telephone call from a project staff member, who attempts to deal with any questions or problems and (as is often necessary) makes arrangements to contact and seek permission from other school district officials.

Securing the cooperation of selected schools is often a long and arduous process. No school is an isolated unit; each is part of a larger local school district or system. Frequently, approval for a school's participation in the survey is required from some official in addition to the principal of the selected school. In some cases this is the superintendent or, particularly in the larger systems, an official whose approval is required for all research conducted in the system. Further complicating the process is the fact that considerable variation exists in the local rules governing research conducted in schools. School boards, teacher associations, and parent associations all may have a voice in whether or not a school participates.

The standard procedure for recruiting a school involves an initial telephone contact with the principal after he or she has received a letter of invitation. If a school refuses, it often occurs at this point. The reasons most commonly given are that there are objections to using student time for surveys, that the school has already participated in too many surveys that year, that there is some temporary crisis or disruption in the system that year (mandatory testing, a teacher strike, budgetary difficulties), that the necessary people will not approve the survey due to its content, or that there are concerns about adverse parental reaction to a survey dealing with social issues. Often a principal will want, or be required, to obtain approval from another source. When refusals occur at higher levels, the reasons given tend to be the same as those listed above.

Once the school's agreement to participate is obtained, arrangements are made by phone for selecting a random sample of seniors (when the school is large) and for administering the questionnaires. A local Survey Research Center representative is assigned to carry out the administration, and a specific date for the survey is mutually agreed upon.

Pre-Administration Arrangements. The local SRC representative is instructed to visit the school two weeks ahead of the actual date of administration. This visit serves as an occasion to meet the teachers whose classes will be affected and to provide them with a brochure describing the study, a brief set of guidelines about the questionnaire administration, and a supply of flyers to be distributed to the students a week to 10 days in advance of the questionnaire administration. The guidelines to the teachers include a suggested announcement to students at the time the flyers are distributed. (Samples of these advance materials are included in the appendices.)

From the students' standpoint, the first information about the study usually consists of the teacher's announcement and the short descriptive flyer. In announcing the study, the teachers are asked to stress that the questionnaires used in the survey are not tests, and that there are no right or wrong answers. The flyer tells students that they will be invited to participate in the study, points out that their participation is strictly voluntary, and stresses confidentiality (including a reference to the fact that the Monitoring the Future project has a special government grant of confidentiality which allows their answers to be protected). The flyer is designed to give participating students, and also their parents, a standardized introduction to the study; it covers the crucial topics of voluntary participation and confidentiality, and presents some positive reasons for participation (e.g., the topics are interesting; the data will be important and widely distributed).

Questionnaire Administration. The questionnaire administration in each school is carried out by the local representatives of the SRC and their assistants, following standardized procedures detailed in a project instruction manual. The questionnaires are administered in classrooms during normal class periods whenever possible; however, circumstances in some schools require the use of larger group administrations. Teachers are not asked to do anything more than introduce the SRC staff members and remain present in order to help guarantee an orderly atmosphere for the survey. Teachers are urged to avoid walking around the room, lest students feel that their answers might be observed.

The actual process of completing the questionnaires is quite straightforward. Respondents are given sharpened pencils and asked to use them because the questionnaires are designed for automatic scanning. Most respondents can finish within a 45-minute class period; for those who cannot, an effort is made to provide a few minutes of additional time.

Procedures for Assuring that Participation is Voluntary and that Confidentiality is Protected. In any study that relies on voluntary reporting of drug use, it is essential to develop procedures which guarantee the confidentiality of such reports. It is also desirable that these procedures be described adequately to respondents so that they are comfortable about providing honest answers, and so that the voluntary nature of their participation is clear.

We noted that the first information given to students about the survey consists of a descriptive flyer stressing confidentiality and voluntary participation. These themes are repeated in the oral instructions at the start of the actual questionnaire administration; and the SRC representative specifically tells any students who do not wish to participate that they have the option of working quietly on their own school work during the class period. Each participating student is instructed to read the message on the cover of the questionnaire, which stresses the importance and value of the study, notes that answers will be kept strictly confidential, and makes this further statement about voluntary participation: "This study is completely voluntary. If there is any question you or your parents would find objectionable for any reason, just leave it blank." The instructions then point out that in a few months a summary of nationwide results will be mailed to all participants, and also that a follow-up questionnaire will be sent to some students after a year. The cover message explains that these are the reasons for asking that name and address be written on a special form which will be removed from the questionnaire and handed in separately. The message also points out that the information on the questionnaire and on the tear-out form cannot be matched except by use of a special computer file at the University of Michigan.

Near the end of the administration period, the SRC staff member instructs students to separate the address form and then fill it out and pass it in separately. The completed questionnaires and the address forms then remain in the possession of the SRC representative until they are mailed. When mailed, the address forms go to SRC, while the questionnaires go directly to the company which scores them, using optical scanning procedures. Once the address forms are separated from the questionnaires it would be impossible for anyone, either research staff or school personnel, to match the two again without the data on the computer file. The questionnaires have an ordered sequence of code numbers, but the computer-printed numbers on the address forms are random numbers. As the instructions to students state, the only way the two could be matched would be to use the special file at the University of Michigan. As a matter of fact, that particular match is never made. Follow-up questionnaires with new numbers are matched to base-year questionnaires without ever directly associating respondents' names with either questionnaire.

The statements and procedures dealing with confidentiality seem to satisfy nearly all high school seniors who participate in the project. As a part of an early data collection, individual interviews were conducted in six participating schools located in five different states. Of a total of 123 interviewees, 91 had completed a Monitoring the Future questionnaire during the previous day. Only two of these respondents said that they were not aware of the project's promise of confidentiality. All respondents were asked, "How much faith do you have in this guarantee?" Only two said they did not have faith in the promise; 85 percent had complete faith in the confidentiality guarantee; the rest said that they did not care (often saying they "had nothing to hide").

Follow-Up Data Collections from High School Graduates[1]

As shown in Figure 1, the design of the Monitoring the Future study includes longitudinal follow-ups of each graduating class. The procedures, discussed in detail below, involve mailed questionnaires, a five dollar payment for each participation, and (when needed) additional prompts by mail and eventually by phone[2]. As discussed below, and illustrated in Figure 1, the "standard" follow-up surveys continue through the seventh wave for each class (13 or 14 years after graduation); we then institute a somewhat different follow-up survey at age 35 (and possibly again at age 40).

Follow-up Design and Strategy. Given the cost and staff effort involved in conducting follow-up surveys, we decided to select only a sub-sample of each original class sample for inclusion in the follow-up panel. From each senior class, two separate groups are selected, using stratified random sampling procedures; each group numbers about 1,200. Members of one group are invited to participate in the first year after graduation, and every two years after that; those in the other group are invited to participate in the second year after graduation, and every two years after that. The result of this approach is that individual participants are surveyed on a two-year cycle, beginning either one or two years after graduation. The two-year cycle was introduced to reduce respondent burden and boredom. The follow-up samples are drawn so as to be largely self-weighting; however, because the primary focus of the study is on drug use, users of illicit drugs are over-sampled for follow-ups by a factor of three to one. Weights are used in all analyses to adjust for the differential selection probabilities.

The rationale for over-sampling drug users is two-fold. First, the study is designed to monitor drug use, and this is by far the single most important area of research treated in the project. Second, the proportions of the age group using each of the illicit drugs other than marijuana are sufficiently low that over-sampling is needed to produce enough cases for detailed longitudinal analysis. The same is true for the particularly important subgroup consisting of daily marijuana users.

Selecting Sub-Samples for Follow-Up Data Collections. The process of sub-sampling to select follow-up respondents is carried out using a stratified random procedure in which the probability of any individual being selected for follow-up is proportional to his or her base-year sampling weight. (The procedure is carried out separately for those in the "recent drug use" stratum described above, and for those in the residual stratum consisting of all other base-year respondents.) As we noted earlier, the base-year sampling procedure is such that sampling weights are necessary. In particular, the fact that our data collection may include as many as 400 seniors per high school means that some schools are represented by nearly 400 students, whereas other smaller schools may be represented by only 100 or fewer. The result is that students from small schools are likely to have higher weights (i.e., be counted more heavily) than students from larger schools. This variation in sampling weights arises from administrative needs in the base-year data collection; but for the follow-up data collections it is much more efficient to have essentially equal weights. By sub-sampling with probability of selection proportional to base-year sampling weight, we can then assign follow-up weights that are equal for virtually all respondents within each of the two strata. Then, to adjust for the over-sampling of follow-up respondents in the "recent drug use" stratum, at the analysis stage we assign them weights one-third the size of the weights of those assigned to the other stratum.

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[1] The follow-up design and procedures were modified extensively after the 1977 data collection. This section describes the new approach. In 1976 and 1977 follow-ups, larger numbers of individuals were invited to participate and no payment was used; but the response rates were about 65 percent in the first year of follow-up and still lower in the second year. These rates were judged by the investigators to be inadequate, so more intensive procedures were developed for use on smaller samples.

[2] Beginning with the class of 1992, the payment was increased to ten dollars, to compensate for inflation over the life of the study, after an experiment indicted this was justified based on increased follow-up response rates.

The sub-sampling procedures described above are applied to each graduating class, thereby producing the target sample for a longitudinal panel which will be involved in follow-up data collections. Each such target sample is then split randomly into two equal halves (cutting across all base-year schools as well as the two strata discussed above). Respondents in one half are asked to complete follow-up questionnaires on the odd-numbered years following graduation; those in the other half are asked to do so on the even-numbered years. This strategy, which is illustrated in Figure 3, permits us (within the same budget) to have twice as many respondents from a given class as we could if we returned to the same individuals every year. However, the primary motivation for requesting biennial rather than annual participation was to reduce the burden on individual respondents, and thus maintain a higher level of continuing participation while still having enough information on each respondent to permit quite detailed longitudinal analyses. The fact that half the follow-up respondents from any graduating class are surveyed one year, and the other half are surveyed the next, means that we still retain the capability of doing detailed cohort trend analyses on an annual basis.

Follow-Up Procedures. The follow-up procedures consist largely of a series of mailings carried out by the project staff in Ann Arbor. The first item is a letter telling the respondent that she or he has been chosen for follow-up study and expressing the hope that they will participate. The next item is a newsletter mailed in December, which describes some of the project findings for that year and also announces that there will be a follow-up data collection in a few months.[3] Included with the newsletter is a card asking the respondent to indicate any change of address or (in the case of respondents who marry) change of name. This mailing thus serves three distinct purposes: (a) it gives all the respondents some feedback from the earlier data collection; (b) it announces the forthcoming data collection to potential participants; and (c) it provides an occasion for updating the file of names and addresses.

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[3] Actually two different newsletters are written each year: one for seniors who will not be followed longitudinally or are being followed for the first time, and one for those being followed on subsequent occasions. We judge these newsletters to be important for continued participation in the study by respondents, but are always mindful of the possibility of contaminating future measurements. The content, therefore, is carefully selected to minimize any such effects.

Figure 3. Target Samples for a Given Class

Approximate Age	"Grade Level"	Approximate Number Targeted	Subsample Group	Number Targeted for Longitudinal Analysis
18	Senior year	18,000	A and B	2,400
19	1 yr. past H.S.	1,200	A	2,400
20	2 yr. past H.S.	1,200	B	
21	3 yr. past H.S.	1,200	A	2,400
22	4 yr. past H.S.	1,200	B	
23	5 yr. past H.S.	1,200	A	2,400
24	6 yr. past H.S.	1,200	B	
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.

Example: High School Class of 1978 Follow-Up Schedule

Base-Year		Follow-Up Years						
1978	Subsampling process	1979	1980	1981	1982	1983	1984	
18,000 → 2,400 →	1,200 (A) →	1,200 →		1,200 →		1,200		. . .
	1,200 (B) →		1,200 →		1,200 →		1,200	. . .

The next mailing consists of the questionnaire used in the follow-up study, which is sent out in mid-April. Enclosed with each questionnaire is a check for five dollars (or, for classes from 1992 onward, ten dollars) made out to the respondent. Return postage-paid mailing envelopes are provided, and an address correction form is attached to the back of the questionnaire. The mailing label containing the respondent's name and address is affixed to the form; respondents are asked to detach the form, leaving only a code number to identify the questionnaire.

Respondents are asked to correct any errors in the mailing label, provide information on any change in their names or addresses, and then mail the card back separately. This procedure of having a name and address card that is separated from the questionnaire is closely parallel to the procedure used in the base-year data collection, and is designed to provide the same high degree of confidentiality.

Within a week after the initial mailing of questionnaires, postcards are sent to all target respondents. The message contains a word of thanks to those who already have completed their questionnaires, and reminds others that the questionnaires are very important to us and that we hope for an early response.

The next steps in the process are contingent upon receipt or non-receipt of a completed questionnaire. About four weeks after the initial questionnaire mailing, a letter is sent to all those who have not yet responded indicating that we have not received the questionnaire and urging them to complete and return it as soon as possible. Several weeks later an attempt is made to telephone all those who still have not responded in order to prompt their response. An additional questionnaire is sent, when requested. The overall effectiveness of this follow-up sequence is indicated by response rates which are very high for mailed questionnaires, particularly for ones which take a fairly long time (roughly 40 minutes) to complete.

Data Collection from Students in Eighth and Tenth Grades

The sampling design and procedures used for the surveys of eighth and tenth grade students were patterned very closely after those used during the past seventeen years for the surveys of high school seniors. Since those were described in considerable detail above, we need review them only briefly here.

Samples of Tenth Grade Students. The data collection each year (beginning in 1991) takes place in approximately 125 public schools and private schools, selected by the Sampling Section of the Survey Research Center to provide an accurate cross section of tenth grade students throughout the 48 coterminous states. The procedures are virtually identical to those used in the data collections from high school seniors, as described above. The sample is multi-stage, with Stage 1 the selection of geographic areas, Stage 2 the selection of one or more schools in each area[4], and Stage 3 the selection of tenth grade students in each school. As with seniors, up to about 350 tenth grade students may be included in the data collection, with random sampling of classrooms used to sample students in schools with more than 350 tenth graders. The resulting samples number about 15,000-17,000 tenth graders.

Samples of Eighth Grade Students. The procedures for sampling eighth graders are identical to those for tenth graders, except that approximately 160 public and private schools (mostly junior high schools and middle schools) are sampled, and 17,000-19,000 students are surveyed. Because schools serving eighth grade students tend to be smaller than those serving tenth or twelfth grade students, there were fewer instances in which it was necessary to subsample from among a large number of eighth graders; in most instances all eighth grade students in the school were included in the sample. The number of eighth grade schools is larger than the number of tenth or twelfth grade schools because of this tendency for middle schools or junior high schools to have fewer students in each grade than their senior high school counterparts.

Administrative Procedures. For the surveys of tenth grade students and eighth grade students, the school recruiting procedures, pre-administration arrangements, questionnaire administration procedures, and procedures for protecting confidentiality and ensuring that participation is voluntary, all are virtually identical to those for the high school senior surveys described earlier. In addition, we routinely utilize an implicit parental consent procedure for the eighth and tenth grade students, unless, of course, a school prefers to utilize any other consent procedure.

REPRESENTATIVENESS AND VALIDITY

Two major sources of bias in survey results are non-representativeness in the sample and invalidity in the measures. An important source of inaccuracy (but not bias) in survey results is sampling error. In this section we address the adequacy of the study along each of these critical dimensions.

Representativeness of Samples (Lack of Bias)

The base-year samples for this study are intended to provide an unbiased representation of secondary school students throughout the coterminous United States. It will now be useful to consider the extent to which the obtained samples of schools and students are likely to be representative of *all* students (i.e., unbiased), and also the degree to which the data obtained are likely to be valid.

We can distinguish at least four ways in which the survey data collected in the Monitoring the Future project might fall short of being fully accurate: (1) some sampled schools refuse to participate, which could introduce some bias; (2) the failure to obtain questionnaire data from 100 percent of the students sampled in participating schools could also introduce bias; (3) the answers provided by participating students are open to both conscious and unconscious distortions, which could reduce validity; and (4) limitations in sample size and/or design place limits on the accuracy of estimates. The effects of this last factor are appropriately termed random sampling errors; these can be estimated statistically, and several illustrations are provided later. The possible effects of the other three factors, however, are non-random biases and are not amenable to precise quantification; instead, we must rely on informed judgment. In the following sections we discuss and offer our judgments on each, elaborating on the facts that underlie our inferences.

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[4] Here, as in the surveys of seniors, schools are asked to participate for two years.

School Participation. As we noted earlier, each school is asked to participate for two years; therefore, a new half-sample (about 60-80 schools, depending on the grade) is recruited each year. When a school is unwilling or for some reason unable to participate, a substitute school is selected to match the originally sampled school in terms of geographic composition and size. It is reasonable to ask whether nonparticipation of some of the originally sampled schools is likely to have a significant effect on the findings. Insofar as population estimates are concerned, the answer depends on two factors: the size of the school participation rate, and the similarity of the substitute schools to the original schools they are replacing. With respect to the first factor, our recent experience suggests that 50-70 percent of initially sampled schools will participate during any given year. With respect to the second factor, the substitutes are chosen carefully to be as similar as possible to the original school. There is no particular reason to expect that the students in schools which refuse are greatly different from those in schools which agree to participate. The reasons for school nonparticipation are based primarily on general policy issues and/or on somewhat happenstance events which are not likely to relate systematically to student drug use. Moreover, in general, schools are not so different in terms of drug use as some might believe. For example, in 1992 the percentage of variance in marijuana use that was "between schools" was about 4% to 6%, depending on the measure (lifetime, annual, monthly). In other words, 95% of the variation in marijuana use was *within* schools. The percentage of variation in alcohol use between schools was also around 5%, and for cigarettes about 3% to 4%. For illicit drugs other than marijuana, the percentages were even lower. For crack cocaine and inhalants, for example, the percentage was less than 2%. In sum, substitute schools are likely to be quite similar in terms of drug use and related variables to the refusal schools.

There is one additional point to be considered. Insofar as monitoring changes is concerned, the effects of school nonparticipation should be minimal. Any systematic biases that might emerge should be approximately replicated from year to year, so the trend data should accurately reflect any major changes which might be occurring. A partial check on the adequacy of the sample of schools for estimating trends is to compare trend data based on the total sample with trend data based only on the half-samples which remain constant across adjacent years. Since these half-samples consist of the same schools, their trends cannot be affected by fluctuations in the school composition of the sample, as might be true for the entire samples. Early in the course of the study we examined drug use trend estimates for 1975 and 1976, comparing the data from all schools with the data from only the constant half-sample. These estimates were extremely similar, suggesting that any errors due to sampling of schools is constant. That exercise has been repeated for the 1976-77 schools, the 1977-78 schools, the

1978-79 schools, and so on up to the present time, each time with the same basic outcome—a confirmation of the trend data found for the total samples. (Although the trend estimates are fairly accurate, the absolute prevalence estimates are less stable, as would be expected from subsamples only half the size of the full samples.)

Student Participation. Recent surveys have obtained useable questionnaires from about 83-84 percent of the seniors in our target samples (a figure, incidentally, which compares quite favorably with most national household surveys). While a very few (less than 1 percent) explicitly refuse to complete the questionnaires, most non-respondents simply are absent from school on the day of the administration. Absentee rates tend to be higher than average in the last third of senior year due to several factors, particularly a higher frequency of extracurricular activities. Higher response rats (about 88-89 percent) are obtained from eighth and tenth graders. Because only one survey administration is conducted in each school (except in cases where the participation rate is less than 70 percent), students who are absent from class on that day are excluded. Since students with higher absentee rates tend to have higher than average rates of drug use (Kandel, 1975; Bachman, Johnston & O'Malley, 1981), missing them is likely to have some effect on drug use estimates.

It is possible to adjust drug use estimates to correct for absenteeism. The questionnaires include items asking respondents how often (and why) they have been absent recently. Responses to these questions can be used to reweight the data to *estimate* total sample findings (i.e., the findings which would have emerged if absentees could have been included). While such an approach has some appeal, we have thus far elected not to incorporate the correction into most of our data analyses. There are several reasons for this decision. First, after we made such adjustments to the drug usage rates using the data on absenteeism (see Johnston & O'Malley, 1985; Johnston et al., 1997), we found that the adjusted figures were only slightly higher than the unadjusted ones. (For example, overall prevalence figures were usually increased by only one-half to two percent for the various drugs.) The complexity of computing adjusted data did not seem to be justified by such slight changes. Second, the very disparate sampling weights created by this adjustment substantially increase the sampling variance (Kish, 1965, p. 560); this results in much larger ranges of uncertainty around only slightly less biased estimates. Finally, as has been pointed out earlier, this study focuses heavily on trends, and any systematic, consistent errors are not likely to affect trend data. Thus, we have concluded that the effects of student nonparticipation on prevalence and trend estimates are minimal and not worth the cost and difficulty of correction in most of our reports.

Omission of Dropouts. We estimate that the omission of dropouts from the sample of high school seniors has a somewhat greater impact on drug use prevalence rates than does the omission of absentees. Again, *trends* should not be affected substantially, because overall dropout rates have changed rather little in recent years. Specifically, ". . . the percentage of students who leave high school before graduating has gradually declined, and differences between dropout rates for blacks and whites have also narrowed, although most of these changes occurred before the mid-1980s." (NCES, 1996b, p. vi). Plausible estimates of drug prevalence rates among dropouts, based on data from a few studies that have included dropouts (Johnston, 1973; Abelson, Fishburne, & Cisin, 1977; Bachman et al., 1978; Fishburne, Abelson, & Cisin, 1980; NIDA, 1991a), can be used to determine an estimate for the overall age cohort. The resulting biases are not dramatic, largely because the dropouts represent only about 15-20 percent of the population. We estimated some time ago (Johnston & O'Malley, 1985) that lifetime prevalences for marijuana, amphetamines, and cocaine are underestimated by about 6 percent, 5 percent, and 4 percent, respectively. Lifetime prevalences for other illicit drugs are underestimated by 3 percent or less. Annual prevalence rates for marijuana, amphetamines, and cocaine are underestimated by about 6 percent, 5 percent, and 3 percent, respectively; annual prevalences for other illicit drugs are underestimated by 2 percent or less. Lifetime and annual use prevalences for alcohol are underestimated to a lesser degree, 1 percent and 2 percent, respectively.

Follow-up Participation. All large-scale longitudinal surveys inevitably suffer from some panel attrition, and the follow-up data collections in this research are no exception. In the first follow-up after high school, 70-80 percent of those initially targeted for participation returned completed questionnaires. The retention rate declines with time, as would be expected. Nevertheless, but the seventh follow-up (13-14 years after high school, modal age 31-32) the total panel retention remained quite high, at about 67 percent of the initial target sample. These retention rates are very respectable compared to most panel studies (particularly considering the low cost nature of the data collection method), and are quite acceptable for analysis purposes.

Of course, those who participate are likely to be somewhat different from those who do not participate, and the likely effect is to underestimate behaviors such as drug use. In previous analyses of Monitoring the Future follow-up data, we have reweighted the data to obtain estimated overall drug use prevalence rates which are adjusted for non-participation, so as to eliminate most of the bias. Briefly, the procedure used is to reweight participating follow-up respondents so that each follow-up panel has (when reweighted) the same base-year prevalence as the total base-year sample for that class year.[5]

This procedure was carried out for each prevalence measure for each of a number of licit and illicit substances, for each follow-up panel. The adjusted follow-up prevalence measures are, as one would expect, higher than the unadjusted figures, though not dramatically so. For example in the 1982 follow-up of the classes of 1976-1981, we found that 30-day prevalence of any alcohol use was increased by 0.3 percentage points (from 78.2 percent before adjustment to 78.5 percent after adjustment), and the 30-day prevalence of daily use was increased by 1.0 percentage points (from 7.7 percent to 8.7 percent). A measure of heavy drinking (having 5 or more drinks in a row on at least one occasion in the prior two weeks) increased by 1.7 percentage points (from 40.3 percent to 42.0 percent). We should note that the adjustments are rather minimal in part because follow-up participation rates are fairly high, and because the financial inducement to participate probably reduces the degree to which willingness to participate varies among subgroups.

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[5] For example, suppose 50% of the entire base-year sample reported using marijuana in senior year, but among those participating in a given follow-up panel from that class only 40% had (as seniors) reported such use. The follow-up respondents who had been users in base-year would be weighted 5/4, and follow-up respondents who had been non-users would be weighted 5/6, thus creating a 50% base-year usage rate for the reconstructed follow-up panel. The follow-up prevalence rates would then be derived by applying these weights to follow-up data. Alternative procedures have been investigated in other analyses of the follow-up data. One procedure involved an extensive search for important predictors (using base-year variables other than use of a specific substance) of participation. Because even the best variables had little power to predict non-participation, the procedure described above provides what we believe to be the best adjustments.

Validity of Self-Report Data

A basic question in all survey work is the extent to which to believe what respondents say. In this study, what respondents say about their use of drugs is of special concern. While the study includes no direct, objective validation of the self-report measures of drug use, a good deal of inferential evidence exists to support their validity:

1. A considerable proportion of all respondents, ranging from 48 percent to 66 percent of each senior class, have admitted to some illicit drug use (Johnston et al., 1997; NIDA, 1991b). These proportions have ranged up to as high as 80 percent by the time respondents reach their mid-twenties.

2. Monitoring the Future data have shown some substantial and predictable relationships between self-reported drug use and other items dealing with attitudes about drug use, and with behaviors such as academic performance, delinquency, and the self-reported use of licit drugs (Bachman, Johnston, & O'Malley, 1981, 1990; Bachman et al., 1988; Bachman et al., 1978, 1980; Bachman, Schulenberg, O'Malley, & Johnston, 1990; Bachman et al., 1997; Johnston, 1973; Johnston et al., 1978; Osgood, Johnston, O'Malley, & Bachman, 1988; Schulenberg et al., 1994). Panel analyses employing several waves of the follow-up data have shown a high degree of stability in these self-reports of drug use (Bachman, O'Malley, & Johnston, 1981, 1984; Bachman, Schulenberg, O'Malley, & Johnston 1990; O'Malley, Bachman, & Johnston, 1983; Osgood et al., 1988; Schulenberg et al., 1994). We view these various findings as providing considerable empirical evidence of construct validity.

3. Very few respondents decline to answer the drug use items, even though they are specifically instructed to leave blank any questions they feel they cannot answer honestly. For all illicit drugs except marijuana, the rates of missing data in 1985 ranged between 2.3 percent and 3.3 percent, which is less than one percent above normal for that point in the questionnaire. For marijuana the missing data rate in 1985 was 3.4 percent (less than two percent above normal). On the whole, these data suggest there is very little under reporting by intentional skipping of questions.

4. Although the longitudinal design of the present study precludes our providing absolute anonymity to respondents, the evidence for improvement in results with complete anonymity has been rather limited. Most investigators who have compared groups differing in degree of anonymity have found little or no difference in self-reports (Brown, 1975; Haberman, Josephson, Zanes, & Elinson, 1972; King, 1970; Leutgert & Armstrong, 1973). One procedure for assuring anonymity is the randomized response technique (Warner, 1965). Zdep, Rhodes, Schwarz, and Kilkenny (1979) found that this technique did seem to elicit more reports of

marijuana use, compared to Abelson et al. (1977), but only among older adults (over 35); among young adults (18-25) the technique actually elicited fewer reports of marijuana use. Another procedure introduced for surveying deviant behavior under anonymous conditions is the "item-count" technique (Miller, Cisin, & Harrell, 1986). With this procedure, the respondent is given a list of an arbitrary number of behavior categories, perhaps three to five. The respondent is then asked to report only how many of these categories apply to him or her. Estimation of the particular deviant behavior in question is possible by using two different forms of the list of behaviors—one with that particular behavior item included, and one with that item deleted. This procedure appeared to be successful in eliciting somewhat higher rates of heroin use, compared to direct self-reports, in certain high risk groups (particularly young men without college education), but there was no significant difference in estimated rates of marijuana or cocaine use. This result seems quite credible; as we indicate in our annual reports "...given the highly illicit nature of this drug (heroin), we deem it the most likely to be underreported" (Johnston, Bachman, & O'Malley, 1981, p. 16). As far as the present study is concerned, the most important finding from the various studies of the validity of self-report methods under various conditions of confidentiality is that the results support the conclusion that the methods used in the Monitoring the Future study are likely to elicit valid reports.

5. A number of methodological studies (e.g., Petzel, Johnson, & McKillip, 1973; Single, Kandel & Johnson, 1975) have included fictitious drugs in survey questionnaires. These fictitious drugs have shown very low levels of reported use, indicating that intentional over reporting is likely to be minimal. (And, in fact, this over reporting may not have been intentional; some respondents, particularly those who tend to be indiscriminate in their drug use, may have erroneously believed that they had actually used the fictitious drugs.)

6. Studies employing other data collection methods have shown similar prevalence rates of drug use for the same age group (Abelson & Atkinson, 1976; Abelson & Fishburne, 1976; Abelson, Fishburne, & Cisin, 1978; Fishburne et al., 1980; Miller et al., 1983; NIDA, 1991b; O'Donnell et al., 1976; and special comparisons using unpublished National Youth Survey data, Elliott, 1986 personal communication). Although rates are generally similar, there are systematic differences; specifically, somewhat lower rates are found in the household interview surveys, compared to the school and mail-out surveys used in the Monitoring the Future study. Rootman and Smart (1985) note a similar finding of more use of tobacco, alcohol, and marijuana in a school survey compared to a household survey. They suggest that two explanations may account for the differences in estimated rates: (1) respondents may be more likely to give socially desirable answers to questions asked in the home than at school, and (2) drug users may be more likely to be missed in household surveys than in school surveys, because the former tend to have lower response rates.

7. Methodological studies have utilized various methods to determine the validity of self-report data on illicit drug use and other illegal behaviors: urinalysis for drug use; polygraph verification; official police, court, medical, and treatment agency documents; and reports by peers, parents, and teachers. Generally, the findings from these studies have been encouraging (see, for example, Amsel, Mandell, Matthias, Mason, & Hocherman, 1976; Bale, 1979; Bale, Van Stone, Engelsing, & Zarcone, 1981; Bauman, Koch, & Bryan, 1982; Bonito, Nurco, & Schaffer, 1976; Cisin & Parry, 1979; Hansen, Marlotte, & Fielding, 1985; Robins, 1974; Smart, 1975; Smart & Jarvis, 1981; Stacy, Widaman, Hays, & DiMatteo, 1985; Whitehead & Smart, 1972). Gold (1977) reviewed the literature on self-reported delinquent behavior of adolescents and concluded that "the best single measure of delinquent behavior available is self-report of delinquency, and (that)... it is accurate enough for use in rigorous research designs and with sophisticated statistics." Similarly, methodological studies have investigated the comparability of self-report data and public records for the legal drugs. In particular, with respect to cigarettes and alcohol, aggregate sales data have been correlated with self-report data, and the results are very supportive of the general validity of self-reports (under proper survey conditions). Hatziandreu et al. (1989) compared national estimates of cigarette use based on self-reports from surveys with national estimates based on tax records, and concluded that surveys were a reliable surveillance tool for monitoring changes in smoking behavior. Smith, Remington, Williamson, and Anda (1990) compared self-reported alcohol use data with state-level data on sales, and concluded that "per capita sales of alcohol generally parallel self-reported consumption. . ." (p. 312).

8. Another line of research on validity has investigated the question whether "objective" or "bogus pipeline" methods are needed. It is reassuring that several investigators have shown that confidential questionnaires were as likely to be valid (that is, they did not produce lower estimates) as questionnaires administered under conditions of objective validation or bogus pipeline procedures. Akers, Massey, Clark, and Lauer (1983) showed that neither a biochemical measure nor a bogus pipeline procedure produced higher estimates of smoking in adolescents (grades 7-12) compared to a confidential questionnaire; and Campanelli, Dielman, and Shope (1987) reported that self-reports of alcohol use by adolescents (grades 7-9) were not affected by a bogus pipeline procedure.

9. The aggregate level trends in reported friends' use tend to parallel very closely the trends in self-reported own use. In addition to their own use, we also ask respondents about the proportions of their friends who use various substances. If there were a tendency for concealment of reporting of one's own behaviors, presumably there would be less of a tendency to underreport friends' behaviors. The fact that trends in friends' use parallel own use suggests a high degree of validity in self-reports of use.

10. Different substances show different trajectories over time. Marijuana use declined earlier than did cocaine, and use of other substances (alcohol for example) did not decline at the same time.

11. One sort of bias which does seem to exist in these self-report measures is a tendency for respondents to underestimate the number of times they have used a drug, when recalling an interval as long as one year. We have examined and reported this problem in some detail (Bachman & O'Malley, 1981), and have noted that it may occur for a wide variety of self-reports of behaviors when the reporting interval grows long. We do take account of this possible source of bias in our reporting of drug use findings from the present study. In particular, our reports of annual use either (a) focus on the distinction between no use and any use, or (b) treat reports of the amount of annual usage in relative rather than absolute terms.

Although the evidence is reassuring for the validity of self-reports in general, under proper conditions, we should note that the evidence is far less convincing for other situations. In particular, when adverse consequences may ensue from honest reporting, or when respondents are not convinced of confidentiality, self-reports must be considered questionable. Surveys of pregnant women (Cohen et al., 1991), arrested individuals (Fendrich & Xu, 1994; Harrison, 1992), juveniles interviewed at home under varying degrees of privacy (Gfroerer, 1985), and employees questioned at their worksite (Lehman & Simpson, 1992) are examples of situations wherein validity may well be suspect. These conditions, wherein admission of use could have substantial negative consequences for the individual, are very different from the conditions of the Monitoring the Future in-school group-administered surveys.[6]

In sum, while there is almost certainly some degree of under reporting of illicit drug use on self-report surveys, we feel that it is far less than most people intuitively assume. Further, for purposes of monitoring trends across time, a fairly constant degree of under reporting should have almost no effect on trend estimates.

Sampling Precision in Annual School Surveys

The errors possible in an estimate based on a sample survey can be classified into two categories—sampling and non-sampling. Having just discussed several possible sources of nonsampling errors, we now focus on sampling error. Sampling error occurs because observations are made on only a sample rather than the entire population under study. For example, during most years of this study there have been roughly three million seniors located in more than twenty thousand high schools, throughout the coterminous United States. Our samples of about 16,000-18,000 seniors clustered in about 125 to 140 schools can provide close, but less than perfect, estimates of the responses that would be obtained if all seniors in all schools were asked to participate.

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[6] In follow-up mail surveys, however, we have found that the degree of recanting of earlier drug use (that is, denying ever having used a substance after reporting such use in an earlier survey) varies by occupational status. Specifically, respondents in the military and those in police agencies are more likely to recant having used illicit substances (Johnston & O'Malley, 1996). These individuals may feel greater likelihood of negative consequences of revealing past use of illicit drugs.

One cannot know for any particular statistic exactly how much error has resulted from sampling; however, one can make reasonably good estimates of confidence intervals, or ranges within which the value would be likely to fall if all schools and all seniors were invited to participate, rather than using only samples of seniors in samples of schools. In a detailed report of drug use in the classes of 1975 through 1983 (Johnston, O'Malley, & Bachman, 1984, Appendix B), we provided detailed tables of confidence intervals for percentages based on the total samples and various subgroups, taking into account that sampling errors differ depending on the drug involved (since clustering by schools differs from one drug to another), the size of the percentage, and whether comparisons among groups or trends across time are involved. Further data on confidence intervals for the full range of Monitoring the Future measures are provided in the annual reports of questionnaire responses from the nation's high school seniors (e.g., Johnston, Bachman, & O'Malley, 1995).

For present purposes, it is sufficient to note that from the 1976 senior sample onward no 95 percent confidence intervals for the total sample, or one-year trends, exceed a value of ± 2.5 percentage points. The majority of confidence intervals are ± 1.0 percent or smaller. As examples of these levels of accuracy, a one-year decline in monthly prevalence of cocaine use from 2.8 percent for the Class of 1989 to 1.9 percent for the Class of 1990 was statistically significant ($p < .001$); between the Class of 1994 and the Class of 1995, statistically significant *increases* included (but were not limited to) 4.0 percent for annual marijuana use ($p<.01$), 2.2 percent for 30-day marijuana use ($p<.05$), 2.2 percent for daily cigarette use ($p<.05$), and 0.6 percent for daily alcohol use ($p<.01$). On the whole, we feel that these samples are providing a high level of accuracy, thus permitting the reliable detection of fairly small shifts from one year to the next. Incidentally, they also permit a high level of confidence when shifts do not occur.

Summary Evaluation: Consistency and the Measurement of Trends

We have noted at several points in the above discussion that a primary purpose of the Monitoring the Future project is to measure changes from one time to another. Accordingly, the measures and procedures have been standardized and applied consistently across each data collection. We have argued that to the extent that any biases remain because of limits in school and/or student participation, and to the extent that there are distortions (lack of validity) in the responses of some students, it seems very likely that such problems will exist in much the same way from one year to the next. In other words, biases in the survey estimates should tend to be consistent from one year to another, leaving the measurement of trends relatively unaffected by such biases. This argument, which is plausible in the abstract, is much more compelling when examined in the light of actual data spanning a full two decades as shown in our most recent NIDA-published annual monograph (Johnston et al., 1997). Even when usage patterns are shifting appreciably from year to year, there is still a regularity and consistency in the findings which provide a great deal of reassurance that the data have high reliability, and that even fairly small trends are genuine. There is, in other words, an orderliness from one year to the next which suggests a high level of precision and sensitivity to trends.

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APPENDIX A: Cover of 12th Grade Base Year Questionnaire

monitoring the future

a continuing study of American youth

This questionnaire is part of a nationwide study of high school seniors, conducted each year by the University of Michigan's Institute for Social Research. The questions ask your opinions about a number of things—the way things are now and the way you think they ought to be in the future. In a sense, many of your answers on this questionnaire will count as "votes" on a wide range of important issues.

If this study is to be helpful, it is important that you answer each question as thoughtfully and frankly as possible. All your answers will be kept strictly confidential, and will never be seen by anyone who knows you.

This study is completely voluntary. If there is any question that you or your parents would find objectionable for any reason, just leave it blank.

In a few months, we would like to mail each of you a summary of the nationwide results from this study. Also, in about a year we would like to mail another questionnaire to some of you, asking about how your plans have worked out and what's happening in your lives.

In order to include you in these mailings, we ask for your name and address on a special form at the end of this questionnaire. This form is to be torn out and handed in separately. Once the address form and the questionnaire have been separated, there is no way they can be matched again, except by using a special computer tape at the University of Michigan. The only purpose for that tape is to match a follow-up questionnaire with this one.

Other seniors have said that these questionnaires are very interesting and that they enjoy filling them out. We hope you will too. Be sure to read the instructions on the other side of this cover page before you begin to answer. Thank you very much for being an important part of this project.

1996

INSTITUTE FOR SOCIAL RESEARCH
THE UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN

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INSTRUCTIONS

1. **This is not a test, so there are no right or wrong answers; we would like you to work fairly quickly, so that you can finish.**

2. **All of the questions should be answered by marking one of the answer spaces. If you don't always find an answer that fits exactly, use the one that comes closest. If any question does not apply to you, or you are not sure of what it means, just leave it blank.**

3. **Your answers will be read automatically by a machine called an optical mark reader. Please follow these instructions carefully:**

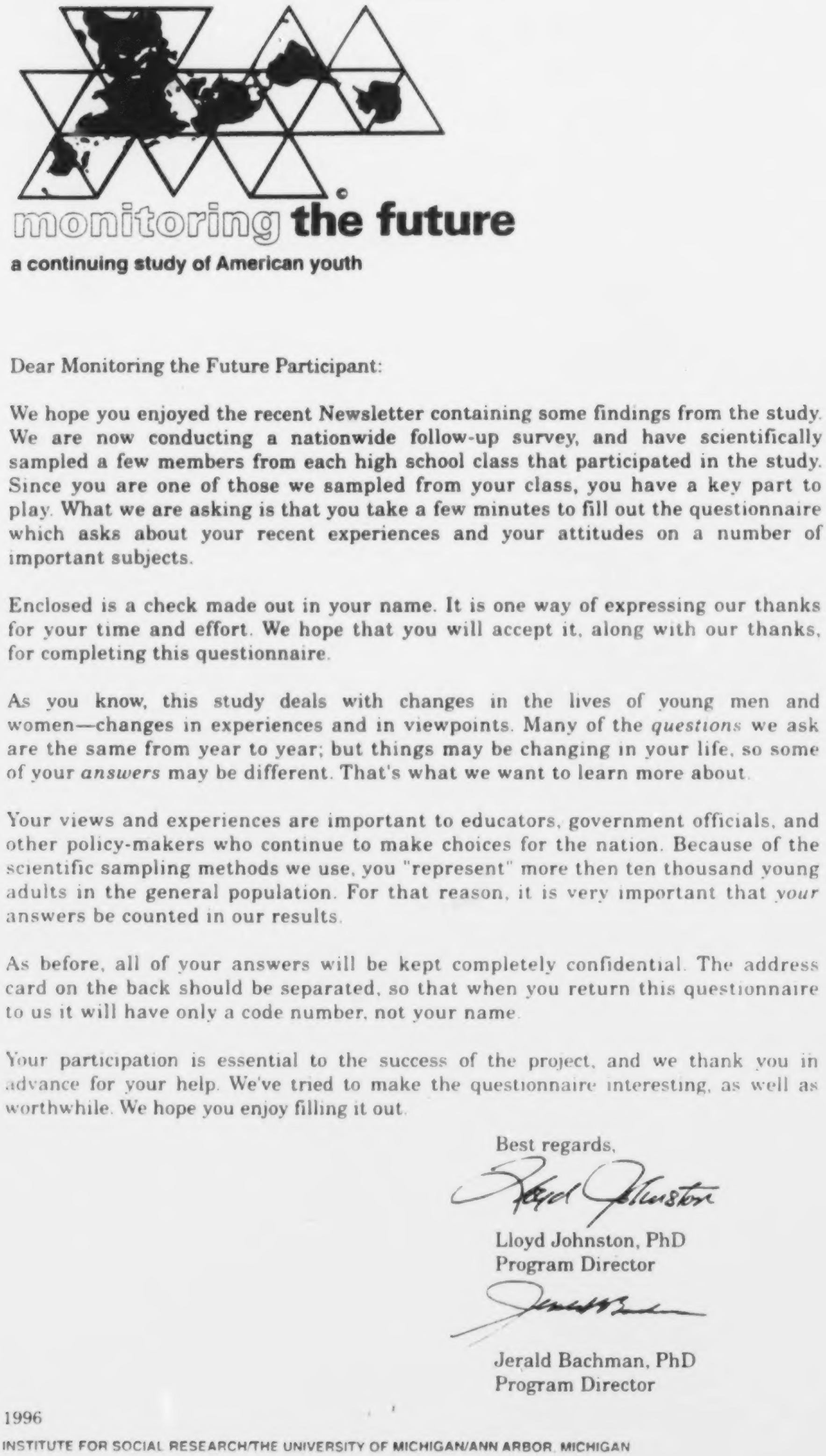
- **Use only the black lead pencil you have been given**
- **Make heavy black marks inside the circles.**
- **Erase cleanly any answer you wish to change.**
- **Make no other markings or comments on the answer pages, since they interfere with the automatic reading. (If you want to add a comment about any question, please use the space provided below.)**

These kinds of markings will work: ● ● ●

These kinds of markings will NOT work: ⊙ ● ○

(THIS SPACE FOR WRITTEN COMMENTS)

APPENDIX B: Cover of Follow-up Questionnaire



monitoring the future

a continuing study of American youth

Dear Monitoring the Future Participant:

We hope you enjoyed the recent Newsletter containing some findings from the study. We are now conducting a nationwide follow-up survey, and have scientifically sampled a few members from each high school class that participated in the study. Since you are one of those we sampled from your class, you have a key part to play. What we are asking is that you take a few minutes to fill out the questionnaire which asks about your recent experiences and your attitudes on a number of important subjects.

Enclosed is a check made out in your name. It is one way of expressing our thanks for your time and effort. We hope that you will accept it, along with our thanks, for completing this questionnaire.

As you know, this study deals with changes in the lives of young men and women—changes in experiences and in viewpoints. Many of the *questions* we ask are the same from year to year; but things may be changing in your life, so some of your *answers* may be different. That's what we want to learn more about.

Your views and experiences are important to educators, government officials, and other policy-makers who continue to make choices for the nation. Because of the scientific sampling methods we use, you "represent" more then ten thousand young adults in the general population. For that reason, it is very important that *your* answers be counted in our results.

As before, all of your answers will be kept completely confidential. The address card on the back should be separated, so that when you return this questionnaire to us it will have only a code number, not your name.

Your participation is essential to the success of the project, and we thank you in advance for your help. We've tried to make the questionnaire interesting, as well as worthwhile. We hope you enjoy filling it out.

Best regards,

Lloyd Johnston

Lloyd Johnston, PhD
Program Director

Jerald Bachman, PhD
Program Director

1996

INSTITUTE FOR SOCIAL RESEARCH/THE UNIVERSITY OF MICHIGAN/ANN ARBOR, MICHIGAN

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INSTRUCTIONS

1. **All of the questions should be answered by marking one of the answer spaces. If you don't always find an answer that fits exactly, use the one that comes closest. If any question does not apply to you, or if you are not sure what it means, just leave it blank.**

2. **Your answers will be read automatically by a machine called an optical mark reader. Please follow these instructions carefully:**

   - **Use only the black lead pencil mailed to you (or any no. 2 black lead pencil).**
   - **Make heavy black marks inside the circles.**
   - **Erase cleanly any answer you wish to change.**
   - **Make no other markings or comments on the answer pages, since they interfere with the automatic reading. (If you want to add a comment about the study or any question, please use the space provided below.)**

   These kinds of markings will work: ● ● ●

   These kinds of markings will NOT work: ⊙ ● ○

(THIS SPACE FOR WRITTEN COMMENTS)

APPENDIX C: 12th Grade Drug Measures
(Part B of Forms 2-5, Base Year and Follow-up)

PART B

The following questions are about cigarette smoking.

1. Have you ever smoked cigarettes?

① Never—**GO TO QUESTION 3**
② Once or twice
③ Occasionally but not regularly
④ Regularly in the past
⑤ Regularly now

2. How frequently have you smoked cigarettes during the past 30 days?

① Not at all
② Less than one cigarette per day
③ One to five cigarettes per day
④ About one-half pack per day
⑤ About one pack per day
⑥ About one and one-half packs per day
⑦ Two packs or more per day

3. Next we want to ask you about drinking alcoholic beverages, including beer, wine, wine coolers, and liquor.

Have you ever had any beer, wine, wine coolers, or liquor to drink—more than just a few sips?

① No—**GO TO TOP OF NEXT COLUMN**
② Yes

4. On how many occasions have you had alcoholic beverages to drink—more than just a few sips...
(Mark one circle for each line.)

	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40 or More
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

5. On the occasions that you drink alcoholic beverages, how often do you drink enough to feel pretty high?

① On none of the occasions
② On few of the occasions,
③ On about half of the occasions
④ On most of the occasions
⑤ On nearly all of the occasions

6. Think back over the LAST TWO WEEKS. How many times have you had five or more drinks in a row? (A "drink" is a bottle of beer, a glass of wine, a wine cooler, a shot glass of liquor, or a mixed drink.)

① None
② Once
③ Twice
④ Three to five times
⑤ Six to nine times
⑥ Ten or more times

The next major section of this questionnaire deals with various other drugs. There is a lot of talk these days about this subject, but very little accurate information. Therefore, we still have a lot to learn about the actual experiences and attitudes of people your age.

We hope that you can answer all questions; but if you find one which you feel you cannot answer honestly, we would prefer that you leave it blank.

Remember that your answers will be kept strictly confidential; they are never connected with your name or your class.

7. On how many occasions (if any) have you used marijuana (grass, pot), or hashish (hash, hash oil)...
(Mark one circle for each line.)

	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40 or More
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

8. On how many occasions (if any) have you used LSD ("acid")...

	0	1-2	3-5	6-9	10-19	20-39	40+
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

9. On how many occasions (if any) have you used psychedelics other than LSD (like mescaline, peyote, psilocybin, PCP)...

	0	1-2	3-5	6-9	10-19	20-39	40+
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

10. On how many occasions (if any) have you used cocaine (sometimes called "coke", "crack", "rock")...

	0	1-2	3-5	6-9	10-19	20-39	40+
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

11. Amphetamines have been prescribed by doctors to help people lose weight or to give people more energy. They are sometimes called uppers, ups, speed, bennies, dexies, pep pills, and diet pills. Drugstores are not supposed

to sell them without a prescription from a doctor. Amphetamines do NOT include any non-prescription drugs, such as over-the-counter diet pills (like Dexatrim®) or stay-awake pills (like No-Doz®), or any mail-order drugs. On how many occasions (if any) have you taken amphetamines on your own—that is, without a doctor telling you to take them...

	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40 or More
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

12. On how many occasions (if any) have you smoked (or inhaled the fumes of) crystal meth ("ice")...

	0	1-2	3-5	6-9	10-19	20-39	40+
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

13. Barbiturates are sometimes prescribed by doctors to help people relax or get to sleep. They are sometimes called downs, downers, goofballs, yellows, reds, blues, rainbows. On how many occasions (if any) have you taken barbiturates on your own—that is, without a doctor telling you to take them...

	0	1-2	3-5	6-9	10-19	20-39	40+
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

14. Tranquilizers are sometimes prescribed by doctors to calm people down, quiet their nerves, or relax their muscles. Librium, Valium, and Miltown are all tranquilizers. On how many occasions (if any) have you taken tranquilizers on your own—that is, without a doctor telling you to take them...

	0	1-2	3-5	6-9	10-19	20-39	40+
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

15. On how many occasions (if any) have you taken heroin using a needle...

	0	1-2	3-5	6-9	10-19	20-39	40+
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

16. On how many occasions (if any) have you taken heroin WITHOUT using a needle...

	0	1-2	3-5	6-9	10-19	20-39	40+
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

17. There are a number of narcotics other than heroin, such as methadone, opium, morphine, codeine, demerol, paregoric, talwin, and laudanum. These are sometimes prescribed by doctors.

On how many occasions (if any) have you taken narcotics other than heroin on your own—that is, without a doctor telling you to take them...

	0	1-2	3-5	6-9	10-19	20-39	40+
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

18. On how many occasions (if any) have you sniffed glue, or breathed the contents of aerosol spray cans, or inhaled any other gases or sprays in order to get high...

	0	1-2	3-5	6-9	10-19	20-39	40+
a. ...in your lifetime?	①	②	③	④	⑤	⑥	⑦
b. ...during the last 12 months?	①	②	③	④	⑤	⑥	⑦
c. ...during the last 30 days?	①	②	③	④	⑤	⑥	⑦

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APPENDIX D: 12th Grade Background Measures
(Part C of All Base Year Forms)

PART C

These next questions ask for some background information about yourself.

1. In what year were you born?

① Before '74 ③ 1975 ⑤ 1977 ⑦ 1979
② 1974 ④ 1976 ⑥ 1978 ⑧ After 1979

2. In what month were you born?

① January ④ April ⑦ July ⑩ October
② February ⑤ May ⑧ August ⑪ November
③ March ⑥ June ⑨ September ⑫ December

3. What is your sex? ① Male ② Female

4. How do you describe yourself?

○ Black or African American
○ Mexican American or Chicano
○ Cuban American
○ Puerto Rican
○ Other Latin American
○ Asian American
○ White (Caucasian)
○ American Indian (Native American Indian)
○ Other

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5. Where did you grow up mostly?

① On a farm
② In the country, not on a farm
③ In a small city or town (under 50,000 people)
④ In a medium-sized city (50,000 - 100,000)
⑤ In a suburb of a medium-size city
⑥ In a large city (100,000 - 500,000)
⑦ In a suburb of a large city
⑧ In a very large city (over 500,000)
⑨ In a suburb of a very large city
⓪ Can't say; mixed

6. What is your present marital status?

① Married
② Engaged
③ Separated/divorced
④ Single

7. How many brothers and sisters do you have? (Include stepbrothers and sisters and half-brothers and sisters)

	None	One	Two	Three	Four	Five	Six or more
a. Older brothers and sisters	⓪	①	②	③	④	⑤	⑥
b. Younger brothers and sisters	⓪	①	②	③	④	⑤	⑥

7c. Which of the following people live in the same household with you? (Mark all that apply.)

○ I live alone
○ Father (or male guardian)
○ Mother (or female guardian)
○ Brother(s) and/or sister(s)
○ Grandparent(s)
○ My husband/wife
○ My child(ren)
○ Other relative(s)
○ Non-relative(s)

The next three questions ask about your parents. If you were raised mostly by foster parents, stepparents, or others, answer for them. For example, if you have both a stepfather and a natural father, answer for the one that was the most important in raising you.

8. What is the highest level of schooling your father completed?

○ Completed grade school or less
○ Some high school
○ Completed high school
○ Some college
○ Completed college
○ Graduate or professional school after college
○ Don't know, or does not apply

9. What is the highest level of schooling your mother completed?

○ Completed grade school or less
○ Some high school
○ Completed high school
○ Some college
○ Completed college
○ Graduate or professional school after college
○ Don't know, or does not apply

10. Did your mother have a paid job (half-time or more) during the time you were growing up?

① No
② Yes, some of the time when I was growing up
③ Yes, most of the time
④ Yes, all or nearly all of the time

11. How would you describe your political preference? (Mark only one circle.)

① Strongly Republican
② Mildly Republican
③ Mildly Democrat
④ Strongly Democrat

⑤ Independent
⑥ No preference
⑦ Other
⑧ Don't know, haven't decided

12. How would you describe your political beliefs? (Mark only one circle.)

① Very conservative
② Conservative
③ Moderate
④ Liberal
⑤ Very liberal
⑥ Radical

⑧ None of the above, or don't know

13. The next three questions are about religion.

a. What is your religious preference?

① Baptist
② Churches of Christ
③ Disciples of Christ
④ Episcopal
⑤ Lutheran
⑥ Methodist
⑦ Presbyterian
⑧ United Church of Christ
⑨ Other Protestant
⑩ Unitarian
⑪ Roman Catholic
⑫ Eastern Orthodox
⑬ Jewish
⑭ Latter Day Saints
⑮ Muslim/Moslem
⑯ Buddhist
⑰ Other religion
⑱ None

b. How often do you attend religious services?

① Never
② Rarely
③ Once or twice a month
④ About once a week or more

c. How important is religion in your life?

① Not important
② A little important
③ Pretty important
④ Very important

(1986 Base Year: Forms 3-6 - Part C)

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14. When are you most likely to graduate from high school?

① By this June
② July to January
③ After next January

⑥ Don't expect to graduate

15. Which of the following best describes your present high school program?

① Academic or college prep
② General
③ Vocational, technical, or commercial
④ Other, or don't know

	Far Below Average	Below Average	Slightly Below Average	Average	Slightly Above Average	Above Average	Far Above Average
16. Compared with others your age throughout the country, how do you rate yourself on school ability?	①	②	③	④	⑤	⑥	⑦
17. How intelligent do you think you are compared with others your age?	①	②	③	④	⑤	⑥	⑦

18. During the LAST FOUR WEEKS, how many whole days of school have you missed...

	None	1 Day	2 Days	3 Days	4 to 5 Days	6 to 10 Days	11 or More
a. Because of illness	①	②	③	④	⑤	⑥	⑦
b. Because you skipped or "cut"	①	②	③	④	⑤	⑥	⑦
c. For other reasons	①	②	③	④	⑤	⑥	⑦

19. During the last four weeks, how often have you gone to school, but skipped a class when you weren't supposed to?

① Not at all
② 1 or 2 times
③ 3-5 times
④ 6-10 times
⑤ 11-20 times
⑥ More than 20 times

20. Which of the following best describes your average grade so far in high school?

⑨ A (93-100)
⑧ A- (90-92)
⑦ B+ (87-89)
⑥ B (83-86)
⑤ B- (80-82)
④ C+ (77-79)
③ C (73-76)
② C- (70-72)
① D (69 or below)

21. How likely is it that you will do each of the following things after high school? (Mark one for each line.)

	Definitely Won't	Probably Won't	Probably Will	Definitely Will
a. Attend a technical or vocational school	①	②	③	④
b. Serve in the armed forces	①	②	③	④
c. Graduate from a two-year college program	①	②	③	④
d. Graduate from college (four-year program)	①	②	③	④
e. Attend graduate or professional school after college	①	②	③	④

22. Suppose you could do just what you'd like and nothing stood in your way. How many of the following things would you WANT to do? (Mark ALL that apply.)

○ a. Attend a technical or vocational school
○ b. Serve in the armed forces
○ c. Graduate from a two-year college program
○ d. Graduate from college (four-year program)
○ e. Attend graduate or professional school after college
○ f. None of the above

23. On the average over the school year, how many hours per week do you work in a paid or unpaid job?

① None
② 5 or less hours
③ 6 to 10 hours
④ 11 to 15 hours
⑤ 16 to 20 hours
⑥ 21 to 25 hours
⑦ 26 to 30 hours
⑧ More than 30 hours

24. During an average week, how much money do you get from...

	None	$1 - 5	$6 - 10	$11 - 20	$21 - 35	$36 - 50	$51 - 75	$76 - 125	$126+
a. A job or other work	①	②	③	④	⑤	⑥	⑦	⑧	⑨
b. Other sources (allowances, etc.)	①	②	③	④	⑤	⑥	⑦	⑧	⑨

25. During a typical week, on how many evenings do you go out for fun and recreation?

○ Less than one
○ One
○ Two
○ Three
○ Four or five
○ Six or seven

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26. On the average, how often do you go out with a date (or your spouse, if you are married)?

① Never
② Once a month or less
③ 2 or 3 times a month
④ Once a week
⑤ 2 or 3 times a week
⑥ Over 3 times a week

27. During an average week, how much do you usually drive a car, truck, or motorcycle?

① Not at all
② 1 to 10 miles
③ 11 to 50 miles
④ 51 to 100 miles
⑤ 100 to 200 miles
⑥ More than 200 miles

28. Within the LAST 12 MONTHS how many times, if any, have you received a ticket (OR been stopped and warned) for moving violations, such as speeding, running a stop light, or improper passing?

⓪ None—**GO TO QUESTION 30**
① Once
② Twice
③ Three times
④ Four or more times

29. How many of these tickets or warnings occurred after you were...

	None	One	Two	Three	Four+
a. Drinking alcoholic beverages?	⓪	①	②	③	④
b. Smoking marijuana or hashish?	⓪	①	②	③	④
c. Using other illegal drugs?	⓪	①	②	③	④

30. We are interested in any accidents which occurred while you were driving a car, truck, or motorcycle. ("Accidents" means a collision involving property damage or personal injury—not bumps or scratches in parking lots.)

During the LAST 12 MONTHS, how many accidents have you had while you were driving (whether or not you were responsible)?

⓪ None—**GO TO TOP OF NEXT COLUMN**
① Once
② Two
③ Three
④ Four or more

31. How many of these accidents occurred after you were...

	None	One	Two	Three	Four+
a. Drinking alcoholic beverages?	⓪	①	②	③	④
b. Smoking marijuana or hashish?	⓪	①	②	③	④
c. Using other illegal drugs?	⓪	①	②	③	④

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APPENDIX E: High School Experiences
(Part E, Questions 12-19 of Base Year Form 2)

11b. Do you think any military draft in the U.S. should include women as well as men?

③ Yes ② Uncertain ① No

The next questions are about your experiences in school.

12. Some people like school very much. Others don't. How do you feel about going to school?

⑤ I like school very much
④ I like school quite a lot
③ I like school some
② I don't like school very much
① I don't like school at all

13. About how many hours do you spend in an average week on all of your homework including both in school and out of school?

① 0 hours
② 1-4 hours
③ 5-9 hours
④ 10-14 hours
⑤ 15-19 hours
⑥ 20-24 hours
⑦ 25 or more hours

14. To what extent have you participated in the following school activities during this school year?

	Not At All	Slight	Moderate	Considerable	Great
a. school newspaper or yearbook	①	②	③	④	⑤
b. music or other performing arts	①	②	③	④	⑤
c. athletic teams	①	②	③	④	⑤
d. other school clubs or activities	①	②	③	④	⑤

15. In general, how much say or influence do you feel each of the following has on HOW YOUR SCHOOL IS RUN? (Mark one circle for each line.)

	Little or No Influence	Some Influence	Moderate Influence	Considerable Influence	A Great Deal of Influence
a. The principal	①	②	③	④	⑤
b. The teachers	①	②	③	④	⑤
c. The students	①	②	③	④	⑤
d. Parents of students	①	②	③	④	⑤

16. Have you had any drug education courses or lectures in school?

① No—**GO TO QUESTION 20**
② No, and I wish I had—**GO TO QUESTION 20**
③ Yes

17. Would you say that the information about drugs that you received in school classes or programs has...

① Made you less interested in trying drugs
② Not changed your interest in trying drugs
③ Made you more interested in trying drugs

18. How many of the following drug education experiences have you had in high school? (Mark all that apply.)

○ A special course about drugs
○ Films, lectures, or discussions in one of my regular courses
○ Films or lectures, outside of my regular courses
○ Special group discussions about drugs

19. Overall, how valuable were the experiences to you?

① Little or no value
② Some value
③ Considerable value
④ Great value

(1996 Base Year - Form 2 - Part E)

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APPENDIX F: Post High School Experiences
(Part C of All Follow-up Forms)

PART C

These next questions ask for some background information.

1. **What is your present marital status?**

① Married
② Engaged
③ Separated/divorced
④ Single

2a. **How many children do you have (including step-children or adopted children)?**

⓪ None ① One ② Two ③ Three or more

2b. **How many times in the past 24 months (including now) have you (or your spouse) been pregnant?**

⓪ None ① One ② Two ③ Three or more

2c. **Are you (or is your spouse) currently pregnant?**

③ Yes, definitely ② Probably ① No

3. **During most of March this year, where did you live?**

○ House
○ Condominium
○ Apartment
○ Rented room
○ Mobile home
○ Military base
○ Dormitory
○ Fraternity or Sorority
○ Jail/prison/correctional facility
○ Other

4. **During March, which of the following people lived in the same household with you?** (Mark ALL that apply.)

○ My husband/wife
○ My partner of the opposite sex
○ My child(ren)
○ My parent(s)
○ Spouse's parent(s)
○ Others
○ I live alone

5. Now we'd like to know about some things you are doing now, or have done, or plan to do. Please look at each activity listed below, and mark the circle which shows how likely you are to do EACH. (Mark one for each line.)

	I'm doing this now	I have done this	Definitely won't	Probably won't	Probably will	Definitely will
a. Attend technical or vocational school (after high school)	⑤	⑥	①	②	③	④
b. Serve on active duty in the armed forces	⑤	⑥	①	②	③	④
c. Attend a two-year college	⑤	⑥	①	②	③	④
d. Graduate from a two-year college program	⑤	⑥	①	②	③	④
e. Attend a four-year college	⑤	⑥	①	②	③	④
f. Graduate from a four-year college program	⑤	⑥	①	②	③	④
g. Attend graduate or professional school after college	⑤	⑥	①	②	③	④

6. What is the last year of school that you COMPLETED?

① 11th grade
② 12th grade
③ One year of college
④ Two years of college
⑤ Three years of college
⑥ Four years of college
⑦ Five or more years of college

7. What is the HIGHEST degree you have earned?

① Less than a high school diploma
② High school diploma or equivalency
③ Associate's degree
④ Bachelor's degree
⑤ Master's degree
⑥ Doctoral degree or equivalent

8. During March of this year, were you taking courses at any school or college? (Mark only one circle.)

① No—**GO TO QUESTION 12**
② Yes, less than half-time
③ Yes, about half-time or more
④ Yes, as a full-time student

9. About how many students are enrolled at that school?

① 1-99
② 100-499
③ 500-999
④ 1,000-2,999
⑤ 3,000-9,999
⑥ 10,000-19,999
⑦ Over 20,000

10a. Were you an active member of a fraternity or sorority (exclude honorary ones)?

② Yes
① No

10b. Which of the following best describes your average grade this year (since last September)?

⑨ A (93-100)
⑧ A- (90-92)
⑦ B+ (87-89)
⑥ B (83-86)
⑤ B- (80-82)
④ C+ (77-79)
③ C (73-76)
② C- (70-72)
① D (69 or below)
⓪ No grades; don't know

11. What has been your major field of study this year?

① Office and clerical (bookkeeping, word processing, etc.)
② Vocational and technical fields
③ Biological sciences (zoology, physiology, etc.)
④ Business (accounting, marketing, personnel, etc.)
⑤ Education (elementary, special, physical, etc.)
⑥ Engineering (civil, electrical, etc.)
⑦ Humanities and Fine Arts (music, religion, English, etc.)
⑧ Physical Sciences and Mathematics (chemistry, etc.)
⑨ Social Sciences (psychology, history, etc.)
⑩ Other academic field
⑪ Academic, but undecided about which major field

12. The next questions ask about your employment during the first full week in March. If you were on vacation from work that week, answer for the week before your vacation.

Which BEST describes your employment during the first full week in March? (Mark only one circle.)

① Two or more different jobs
② One full-time job
③ One part-time job
④ Full-time homemaker (no outside job)
⑤ Laid-off or waiting to start a job
⑥ No paid employment at all that week

13a. Which BEST describes your primary job that week?	**13b. Which BEST describes the last job you held?**

⓪ Never had a job—**GO TO QUESTION 19**
① Laborer (car washer, sanitary worker, farm laborer)
② Service worker (cook, waiter, barber, janitor, gas station attendant, practical nurse, beautician)
③ Operative or semi-skilled worker (garage worker, taxicab, bus or truck driver, assembly line worker, welder)
④ Sales clerk in a retail store or by phone (phone sales, department store clerk, drug store clerk)
⑤ Clerical or office worker (bank teller, bookkeeper, secretary, postal clerk or carrier, keyboard operator)
⑥ Protective service (police officer, firefighter, detective)
⑦ Military service
⑧ Craftsman or skilled worker (carpenter, electrician, brick layer, mechanic, machinist, tool and die maker, telephone installer)
⑨ Farm owner, farm manager
⑩ Owner of a small business (restaurant owner, shop owner)
⑪ Sales representative (insurance agent, real estate broker, bond salesperson)
⑫ Manager or administrator (office manager, sales manager, school administrator, government official)
⑬ Professional without doctoral degree (registered nurse, librarian, engineer, architect, social worker, accountant, actor, artist, musician, teacher, pilot, computer programmer or analyst)
⑭ Professional with doctoral degree or equivalent (lawyer, physician, dentist, scientist, college professor)
⑮ None of the above

(1996 Follow-up Forms 2, 5 - Part C)

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14. Which BEST describes the kind of setting in which you did (do) this work? (Mark only one circle.)

① A large corporation
② A small business
③ A government agency
④ The military service
⑤ A school or university
⑥ A police department or police agency
⑦ A social service organization
⑧ With a small group of partners
⑨ On your own (self-employed)
⓪ None of these

15. During March, about how many hours a week did you work on your job(s)?

① 1-14 hours a week
② 15-29
③ 30-34
④ 35-39
⑤ 40 hours a week
⑥ 41-48
⑦ 49-59
⑧ 60 or more

⑨ Did not work in March—**GO TO QUESTION 17**

16. During March, about how much did you earn PER HOUR on the average? (Answer for your most important job and include all earnings before deductions. If not sure, guess.)

(00) Did not get paid
(01) Less than $3.00 per hour
(02) $3.00 - $3.49
(03) $3.50 - $3.99
(04) $4.00 - $4.49
(05) $4.50 - $4.99
(06) $5.00 - $5.49
(07) $5.50 - $5.99
(08) $6.00 - $6.49
(09) $6.50 - $6.99
⑩ $7.00 - $7.99
⑪ $8.00 - $8.99
⑫ $9.00 - $9.99
⑬ $10.00 - $11.99
⑭ $12.00 - $14.99
⑮ $15.00 - $19.99
⑯ $20.00 - $24.99
⑰ $25.00 - $29.99
⑱ $30.00 - $39.99
⑲ $40.00 or more

17. During all of last calendar year (January 1 to December 31), how many MONTHS were you working at a full-time paid job?

⓪ None
① One
② Two
③ Three
④ Four
⑤ Five
⑥ Six
⑦ Seven
⑧ Eight
⑨ Nine
⑩ Ten
⑪ Eleven
⑫ Twelve

18. During all of last year (January 1 to December 31), how much did you yourself earn, before taxes? (Include only pay for work, such as salary, wages, tips, commissions, etc.)

(00) $0
(01) $1 - $999
(02) $1,000 - $1,999
(03) $2,000 - $2,999
(04) $3,000 - $3,999
(05) $4,000 - $5,999
(06) $6,000 - $7,999
(07) $8,000 - $9,999
(08) $10,000 - $11,999
(09) $12,000 - $14,999
⑩ $15,000 - $16,999
⑪ $17,000 - $19,999
⑫ $20,000 - $24,999
⑬ $25,000 - $29,999
⑭ $30,000 - $34,999
⑮ $35,000 - $39,999
⑯ $40,000 - $49,999
⑰ $50,000 or more

(1996 Follow-up: Forms 2, 5 - Part C)

19. During all of last year (January 1 - December 31), how much of your financial support came from each of the following sources?
(Mark one circle for each line.)

	None	A little (1-20%)	Some (21-40%)	About half (41-60%)	Most (61-80%)	Almost all (81-99%)	All
a. Yourself	⓪	①	②	③	④	⑤	⑥
b. Your spouse	⓪	①	②	③	④	⑤	⑥
c. Your parents	⓪	①	②	③	④	⑤	⑥
d. Unemployment compensation	⓪	①	②	③	④	⑤	⑥
e. Welfare (ADC, food stamps, etc.)	⓪	①	②	③	④	⑤	⑥
f. All other sources	⓪	①	②	③	④	⑤	⑥

20. During all of last year (January 1 to December 31), how many weeks were you unemployed AND looking for work, or on lay-off from a job?

⓪ None
① 1-2 weeks
② 3-4 weeks
③ 5-9 weeks
④ 10-14 weeks
⑤ 15-20 weeks
⑥ 21-26 weeks
⑦ 27 or more weeks

21. During March, how many whole days of work did you miss...

	None	1 Day	2 Days	3 Days	4 to 5 Days	6 to 10 Days	11 or More
a. Because of illness	①	②	③	④	⑤	⑥	⑦
b. For other reasons	①	②	③	④	⑤	⑥	⑦

The next questions are about some other things in your life.

22a. How would you describe your political preference? (Mark one.)

① Strongly Republican
② Mildly Republican
③ Mildly Democrat
④ Strongly Democrat
⑤ Independent
⑥ No preference
⑦ Other
⑧ Don't know, haven't decided

22b. How would you describe your political beliefs? (Mark one.)

① Very conservative
② Conservative
③ Moderate
④ Liberal
⑤ Very liberal
⑥ Radical
⑧ None of the above, or don't know

23. How often do you attend religious services?

① Never
② Rarely
③ Once or twice a month
④ About once a week or more

24. How important is religion in your life?

① Not important
② A little important
③ Pretty important
④ Very important

25. During a typical week, on how many evenings do you go out for fun and recreation?

○ Less than one
○ One
○ Two
○ Three
○ Four or five
○ Six or seven

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26. On the average, how often do you go out with a date (or your spouse, if you are married)?

① Never
② Once a month or less
③ 2 or 3 times a month
④ Once a week
⑤ 2 or 3 times a week
⑥ Over 3 times a week

27. During an average week, how much do you usually drive a car, truck, or motorcycle?

① Not at all
② 1 to 10 miles
③ 11 to 50 miles
④ 51 to 100 miles
⑤ 101 to 200 miles
⑥ More than 200 miles

28. Within the LAST 12 MONTHS how many times, if any, have you received a ticket (OR been stopped and warned) for moving violations, such as speeding, running a stop light, or improper passing?

⓪ None—**GO TO QUESTION 30**
① Once
② Twice
③ Three times
④ Four or more times

29. How many of these tickets or warnings occurred after you were...

	None	One	Two	Three	Four +
a. Drinking alcoholic beverages?	⓪	①	②	③	④
b. Smoking marijuana or hashish?	⓪	①	②	③	④
c. Using other illegal drugs?	⓪	①	②	③	④

30. We are interested in any accidents which occurred while you were driving a car, truck, or motorcycle. ("Accidents" means a collision involving property damage or personal injury—not bumps or scratches in parking lots.)

During the LAST 12 MONTHS, how many accidents have you had while you were driving (whether or not you were responsible)?

⓪ None—**GO TO QUESTION 32**
① One
② Two
③ Three
④ Four or more

31. How many of these accidents occurred after you were...

	None	One	Two	Three	Four +
a. Drinking alcoholic beverages?	⓪	①	②	③	④
b. Smoking marijuana or hashish?	⓪	①	②	③	④
c. Using other illegal drugs?	⓪	①	②	③	④

32. During March of this year did you live mostly...

① On a farm
② In the country, not on a farm
③ In a small city or town (under 50,000 people)
④ In a medium-sized city (50,000 - 100,000)
⑤ In a suburb of a medium-sized city
⑥ In a large city (100,000 - 500,000)
⑦ In a suburb of a large city
⑧ In a very large city (over 500,000)
⑨ In a suburb of a very large city

33. In what state were you living?

① Al
② Ak
③ Ar
④ Az
⑤ Ca
⑥ Co
⑦ Ct
⑧ De
⑨ DC
⑩ Fl
⑪ Ga
⑫ Hi
⑬ Id
⑭ Ia
⑮ Il
⑯ In
⑰ Ks
⑱ Ky
⑲ La
⑳ Ma
㉑ Md
㉒ Me
㉓ Mi
㉔ Mn
㉕ Mo
㉖ Ms
㉗ Mt
㉘ NC
㉙ ND
㉚ Ne
㉛ NH
㉜ NJ
㉝ NM
㉞ Nv
㉟ NY
㊱ Oh
㊲ Ok
㊳ Or
㊴ Pa
㊵ RI
㊶ SC
㊷ SD
㊸ Tn
㊹ Tx
㊺ Ut
㊻ Va
㊼ Vt
㊽ Wa
㊾ Wi
㊿ WV
(51) Wy
(52) Other

APPENDIX G: Base Year Address Form

WHY YOUR NAME AND ADDRESS?

As we told you earlier, we'd like to send you a summary of the nationwide results of the present study, and in about a year we want to mail a similar questionnaire to some of you. In order to include you in these mailings, we would like to have an address where information will be sure to reach you during the coming year.

HOW IS CONFIDENTIALITY PROTECTED?

- **The information on this page will be used ONLY for mailing, and will always be kept separate from your answers. A special Grant of Confidentiality from the U.S. government protects all information gathered in this research project.**
- **The questionnaire and address cards will be collected separately, sealed immediately in separate envelopes, and sent to two different cities for processing.**
- **Once a questionnaire and address card have been separated, there is no way they can be matched, except by using a special computer tape at the University of Michigan. That tape contains the two DIFFERENT numbers that appear on the back of this address card and on the back of the questionnaire. These numbers will be used ONLY to match a follow-up questionnaire with this one.**

Before filling out this address card, please separate it from the rest of the questionnaire by FOLDING ALONG THE PERFORATED LINE AND TEARING CAREFULLY.

Please **PRINT** your name and address.

____
FIRST NAME INTIAL LAST NAME

STREET ______________________________
NUMBER STREET (APT#)

CITY ______________________________

STATE ____________________ ZIP __________

TELEPHONE NO. ( ) - ______________
AREA

In case we should have trouble getting mail to you if you move, please **PRINT** the information requested below.

Many students have a different last name from the parent(s) or guardian they live with. Please print your parent's or guardian's last name if it is different from yours.

____
LAST NAME

Please **PRINT** the name and address of one other person (with a different address than your own) who will know where to reach you in the future. (Examples of such a person: grandparent, aunt or uncle, older sister or brother.)

____
FIRST NAME INTIAL LAST NAME

STREET ______________________________
NUMBER STREET (APT#)

CITY ______________________________

STATE ____________________ ZIP __________

TELEPHONE NO. ( ) - ______________
AREA

THANK YOU AGAIN FOR YOUR HELP

BEST COPY AVAILABLE

Please check the mailing label below.

HAVE YOU MOVED OR ARE YOU ABOUT TO MOVE?

HAS YOUR NAME CHANGED OR WILL IT SOON CHANGE?

ARE THERE ERRORS ON THE LABEL?

- If YES (for any of these), please fill out the correct information in the box ▶ Then separate this card and mail it to us. (The card requires no postage; simply drop it in the mailbox.)
- If the label is completely correct, then separate this card and throw it away. (If we don't hear from you, we will assume the label is correct.)

FIRST NAME ____ INITIAL ____ LAST NAME ____

STREET ____ NUMBER ____ STREET ____ (APT #) ____

CITY ____

STATE ____ ZIP ____

TELEPHONE NO. (AREA) ____

BEFORE MAILING BACK THE QUESTIONNAIRE, PLEASE SEPARATE THIS CARD BY FOLDING ALONG THE PERFORATED LINE AND TEARING CAREFULLY.

Printed in U.S.A.
Mark Reflex® by NCS 8M0103133-2 3.

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APPENDIX I: Letter of Invitation to New Schools

The University of Michigan

MONITORING THE FUTURE PROGRAM • SURVEY RESEARCH CENTER
INSTITUTE FOR SOCIAL RESEARCH • ANN ARBOR, MI 48106-1248
TELEPHONE: 313/763-5043
800/766-2864
FAX: 313/936-0043

September 4, 1996

Mr. John Jones, Principal
Main Senior High School
600 North 10th Street
Sometown, AZ 72315

Dear Mr. Jones:

I am writing to invite your school to participate in one of the nation's most important studies of American young people, *Monitoring the Future*, now in its twenty-third year. Results from our study are used for many worthwhile purposes, including measurement of progress towards Goal 7 of the National Education Goals: "Safe, disciplined, and drug-free schools." Study findings are widely disseminated through the national media and are used extensively by policy makers at the federal, state, local, and district levels.

Your part in this nation-wide endeavor would be to allow your 12th graders to take a 45-minute self-administered questionnaire, preferably during a regular class period. Monitoring the Future's procedures minimize the impact on the normal functioning of the school. Our trained field personnel will conduct the administrations one day in the spring of 1997 and again in the spring of 1998.

Students are asked about their experiences and views on a wide range of subjects of importance to the nation, including their educational and occupational plans and experiences, life goals, use of leisure time, health and safety, alcohol and drug use, and attitudes toward major institutions. There are no questions dealing with sexual behavior, abortion, or sensitive parental behaviors. Student responses are kept in complete confidence and are reported in a statistical fashion which does not identify individual students or schools.

After the data have been collected and tabulated, you will receive the only copy of an individualized school report comparing your students' responses with national data. In addition, you will receive complimentary copies of our national report for three years following your participation.

In a few days I, or my associate, Margaret Libsch, will call you to discuss the study further and answer any questions you may have. We very much hope that you will help us to continue this important and exciting venture. In the meantime, thank you very much for your consideration.

Sincerely yours,

Lloyd D. Johnston, Ph.D.
Program Director

LDJ:pb

Enclosures

APPENDIX J: Fact Sheet for Principals

MONITORING THE FUTURE
Fact Sheet For Principals

What is Monitoring the Future?

Monitoring the Future is a long-term, annual study of American students conducted by the University of Michigan's Survey Research Center (SRC). The SRC is part of the world's largest university-based social science research organization. Monitoring the Future is funded by the National Institutes of Health.

Importance of Your Participation

In order to obtain an accurate cross-section of all 12th graders in the United States, and to minimize the burden on schools, we use a carefully controlled sampling procedure to select only about 150 schools each year. Your school is one of the few selected by this scientific process. Therefore, your participation is very important to the representativeness of the national sample. Although the study is ongoing, no school participates more than two years in a row. We invite your school's participation in the national 12th grade sample in the spring of 1997 and the spring of 1998.

Confidentiality

Both the school's participation and student responses are kept in complete confidence. Study findings are reported only in a statistical fashion which will not identify individual students or schools. A Grant of Confidentiality from the U.S. Department of Justice fully ensures our ability to keep the data confidential. Student participation is completely voluntary.

Involvement of School Staff

Although we ask teachers to stay in their classrooms and to take attendance, they are free to do other things during the administration of the survey. We do not request access to student records. Monitoring the Future pays all costs associated with the study.

Timeline for Participation

Next January or February a member of our Ann Arbor staff will call the principal, or a designated contact person, to schedule the survey on a mutually agreeable date between February 15 and May 1. About ten days prior to the date selected, our field representative visits each school for about half an hour to provide participating classroom teachers with student flyers describing the study, and to meet the principal and/or liaison person. On the scheduled administration date, the same field representative returns, with assistants as needed, to carry out the survey during normal class periods.

Reports to Principals

We will send you an individualized *School Report.* Because this report is based on the combined responses of students in your school, we will send you the only copy by certified mail. An example of the information given in this report is enclosed.

Dissemination of Results

Findings from the study have appeared repeatedly in virtually every major newspaper in the country; the national news programming of all television networks; magazines such as *Newsweek, Time, Reader's Digest,* and the *NASSP Journal;* and in many prestigious social science and health journals. The study contributes major measurements for assessing progress towards several national goals, including Goal 7 of the National Educational Goals, a number of National Health Objectives for the Year 2000, and some goals in the National Drug Control Strategy issued annually by the White House.

Detroit Free Press

Survey finds use of drugs among teenagers on rise

Special Double Issue

U.S.NEWS

Anti-drug effort relies on positive themes

Adolescent Substance Use and Addictions: Epidemiology, Current Trends, and Public Policy

Change in the All Volunteer Force: Reflections in Youth Attitudes

Perceptions of High School Counseling Activities: Response Differences According To College Plans

Parttime jobs not all good news for teens

ANN ARBOR

Most area teens say yes to alcohol, survey finds

Teen drug use

Research Brief

Students and Their Meetings with Guidance Counselors: Findings From a National Study

How Part-Time Work Intensity Relates to Drug Use, Problem Behavior, Time Use, and Satisfaction Among High School Seniors: Are These Consequences or Merely Correlates?

Jerald G. Bachman and John Schulenberg

Monitoring the Future results are regularly reported in a variety of national newspapers and magazines, professional journals, and scholarly publications.

Philadelphia Inquirer

Tuesday, February 1, 1994

More drugs among the young

A survey finds a striking reversal of the downward trend

Strict Controls Proposed to Keep Young From Smoking

A plan to nip in the bud an addiction that is born in youth.

The New York Times

Week in Review

Drug Use Increases Among Teen-Agers

THE BOSTON GLOBE • THURSDAY, MARCH 23, 1995

Public's attitude toward cocaine shifts

Popularity drops as risks become obvious

USA TODAY

1 IN THE USA . . . FIRST IN DAILY READERSHIP

Teen-agers' drug use is on the upswing

Inhalants are a growing risk

THE WALL STREET JOURNAL

Teenage Smoking on Rise, Particularly Among the Youngest, U.S. Study Finds

High School Educational Success and Subsequent Substance Use: A Panel Analysis Following Adolescents into Young Adulthood

JOHN SCHULENBERG
JERALD G. BACHMAN
PATRICK M. O'MALLEY
LLOYD D. JOHNSTON

ADOLESCENT SUBSTANCE USE

Epidemiology and Implications for Public Policy

Patrick M. O'Malley, PhD, Lloyd D. Johnston, PhD, and Jerald G. Bachman, PhD

AMERICAN HEALTH

Getting High on Household Products

Waiting to Exhale

Smoking: Black kids don't.

New York Times

TUESDAY, FEBRUARY 1, 1994

Survey Finds Marijuana Use Is Up in High Schools

CRIMINOLOGY

TIME TRENDS AND AGE TRENDS IN ARRESTS AND SELF-REPORTED ILLEGAL BEHAVIOR

D. WAYNE OSGOOD
University of Nebraska-Lincoln

PATRICK M. O'MALLEY
JERALD G. BACHMAN
LLOYD D. JOHNSTON
The University of Michigan

APPENDIX L: 4-Page Description of Study

Monitoring the Future

a continuing study of American youth

1817

> *In a period of revolutionary changes in the lives of American families, children, and youth, it is especially important to have carefully monitored systematic data on these changes and their consequences. Few top flight research scientists have been willing and able to provide this necessary data base. Among them, these researchers at the University of Michigan's Survey Research Center have been outstanding not only in providing the data base, but also in their careful analysis and balanced interpretation of major trends.*
>
> *Urie Bronfenbrenner*
> *Noted Developmental Psychologist*

Design of the Study

Each year since 1975, Monitoring the Future has surveyed a nationwide sample of high school seniors. Since 1991, the project has also included nationwide samples of 8th and 10th grade students. In addition, annual follow-up surveys are mailed to a sample of each class for a number of years after their initial participation. The Monitoring the Future project is conducted by the University of Michigan's Survey Research Center (SRC)*.

Research Questions

The study focuses on students' experiences and views about a wide range of subjects of importance to the nation. The questions listed below provide a sampling of the kinds of issues treated in this study:

- Is there emerging a generation with fundamentally different attitudes and values? If so, what are the changes and how fast are they occurring? What are the implications of these changes for the future of our society?
- Is the social meaning of drug use, alcohol use, or cigarette smoking changing? Are patterns of use changing? What are the trends for specific substances?
- How do young people feel about the educational and economic opportunities available to them? Do they feel they are treated fairly?
- How many hours do students work? At what kinds of jobs? What effect does working have on students? And what are the trends in those effects?
- How do students spend their leisure time? Do they do more or less homework today, compared to a few years ago? Do they read less and watch more TV? What effects are changes in these activities having on students?

These questions are addressed annually in the school-based surveys, as well as in the follow-up surveys. Thus, four kinds of change can be identified:

- changes from one class cohort to another
- life cycle or maturational changes which show up consistently for all cohorts
- changes in particular years reflected across all age groups
- changes linked to different types of environments (high school, college, employment, etc.) or role transitions (leaving the parental home, marriage, parenthood, etc.).

---

*The project is funded by the National Institutes of Health.

Questionnaire Administration

Students are asked to complete a self-administered, 45-minute paper and pencil questionnaire. The procedures have been designed to minimize impact on the normal school day. To avoid placing any unnecessary burden on the school staff, SRC staff members conduct all questionnaire administrations. This arrangement also provides further guarantees that student responses will be kept confidential.

SRC staff members will spend no more than one day in your school, will not request access to any school records, and will ask only that the teacher be present during the administration. Our representatives will bring questionnaires and pencils to your school, distribute them to the students (either in classrooms or in a mass gathering), and then collect the completed questionnaires.

Dissemination of Results

Results from the Monitoring the Future Study are reported in many ways:

- Results contained in the annual reports of nationwide responses are disseminated to the news media, key decision makers in Washington, members of the education community, and interested members of the public. Each principal of a participating school receives this annual report for 5 years.
- The results are reported in a variety of scholarly, professional, and popular publications, such as *Developmental Psychology, Public Opinion Quarterly, NASSP Bulletin, Newsweek, Time, Reader's Digest, etc.*
- The study's principal investigators have served as advisors to the White House, both Houses of Congress, the United Nations, the World Health Organization, the U.S. Department of Education, and the National Institute on Drug Abuse.

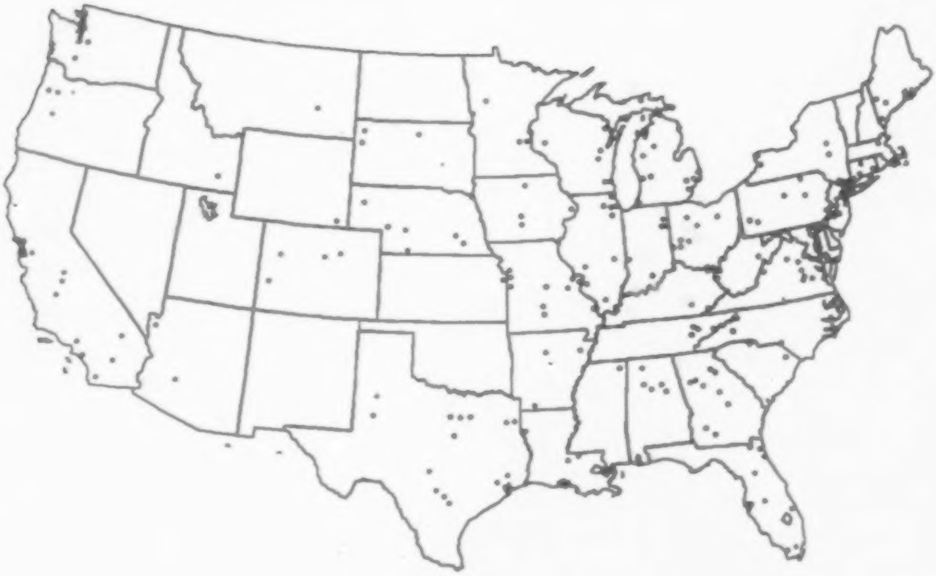
Confidentiality

The identities of participating communities, schools, and students are all kept in complete confidence. Results are reported only in a statistical fashion which does not identify individual students or schools. A Grant of Confidentiality from the U.S. Department of Justice fully ensures our ability to keep the data confidential. Of course, student participation is completely voluntary.

Sample Selection

Each year, data collections take place in about 150 public and private schools at each grade level. The schools are selected by the Sampling Section of the Survey Research Center to provide an accurate cross-section of secondary school students throughout the United States. The number of schools is deliberately kept small to limit the total demands placed on the educational community.

Within each school, up to 350 students are sampled. In schools with fewer than 350 students in the relevant grade, the total class is included. In larger schools, a subset of the class is selected by sampling classrooms or by other methods convenient to the school. The total sample of students for each grade level numbers about 17,000.



Approximate Locations of Participating 8th, 10th and 12th Grade Schools

SURVEY RESEARCH CENTER

The University of Michigan's Survey Research Center has been conducting nationwide surveys of adults and young people for nearly fifty years. It is part of the world's largest university-based social science research organization. It has a world-wide reputation for its work in the fields of sociology, psychology, political science, economics, and education.

APPENDIX M: Instructions to Teachers for Classroom Administrations

1817

The University of Michigan

MONITORING THE FUTURE PROGRAM • SURVEY RESEARCH CENTER
INSTITUTE FOR SOCIAL RESEARCH • ANN ARBOR, MI 48106-1248
TELEPHONE: 313/763-5043
800/766-2864
FAX: 313/936-0043

MEMORANDUM

TO: Teachers of Students Participating in the Monitoring the Future Study

FROM: The Staff of the Monitoring the Future Project, Institute for Social Research, The University of Michigan

DATE: Spring, 1996

As you have probably heard, the University of Michigan will be conducting an important, nationally recognized survey of some of the students in your school. As one of the teachers whose classes have been selected to participate in the study, you will play an important part in its success. You probably will be the person to announce the study to your students, and to distribute fliers which describe the study in more detail. In addition, your presence in the room on the day the questionnaire is administered will help to maintain an orderly and businesslike atmosphere. We would like to thank you in advance for your help with this research.

Please take a few minutes to familiarize yourself with the nature of the study by reviewing this sheet and the enclosed materials. The four-page brochure describes the design of the study, its research topics, and dissemination of survey results. The blue fliers, intended for distribution to students, provide similar information.

Announcing the Survey

The manner in which you present the survey to your students will have a pronounced effect upon the importance they ascribe to their participation in the project. Therefore, we ask that you follow the procedures described below as closely as possible.

Several days before the questionnaire is scheduled to be administered, we would like you to (1) distribute the blue fliers to each student enrolled in your participating classes, (2) post the four-page brochure, and (3) make an announcement which includes the following information:

- The University of Michigan is conducting a nationwide survey of 8th, 10th and 12th grade students. Students in this school are being asked to take part in that survey. (In some schools all students in one of these grades are asked to participate. In larger schools only a sample of the students are included.)

(over)

- The questionnaires used in the survey are not tests. There are no right or wrong answers; the questionnaires simply ask about the feelings, opinions, and experiences of young people.

- The purpose of the survey is to learn how young people feel about a number of important issues—topics like education, work, leisure, the environment, drugs, and government policies.

- The flier provides some information about the study. Those who would like more information may look over the four-page brochure.

- The administration will take place on ______________________________________.

Questionnaire Administration

The actual administration of the questionnaire will be done by experienced members of The University of Michigan's interviewing staff. In most cases these are people who live in your area and are regularly employed by the University to conduct nationwide surveys. This means that you will not be burdened with any administrative responsibilities. There are just three things we ask that you do on the day of the questionnaire administration.

- Please introduce our staff member to the students. A very brief introduction will suffice, such as: "This is Mrs. Smith, representing The University of Michigan. She is here today to conduct the Monitoring the Future survey you heard about earlier."

- Please complete the enclosed Enrollment Verification Sheet and give it to The University of Michigan interviewer on the day of the administration with that day's class enrollment for each of your participating classes. In order to maintain the integrity of the sample, it is necessary that at least 70% of the students chosen from your school actually attend the questionnaire administration. The Enrollment Verification Sheet will assist us in the computation of the response rate.

- To help guarantee an orderly atmosphere for the survey administration, we would prefer that you remain in the room while the questionnaires are being administered. Once the students begin work on the questionnaires you will not be asked for any additional help, so you will be free to use the time for your own work. *In fact, we urge you to avoid walking around the room so students won't feel that you might see their answers.* Our staff member will be prepared to respond to any questions from students.

Thank you again for your help. We know it will influence the quality of your students' responses.

APPENDIX N: Instructions to Teachers for Mass Administrations

The University of Michigan

MONITORING THE FUTURE PROGRAM • SURVEY RESEARCH CENTER
INSTITUTE FOR SOCIAL RESEARCH • ANN ARBOR, MI 48106-1248
TELEPHONE: 313/763-5043
800/766-2864
FAX: 313/936-0043

MEMORANDUM

TO: Teachers of Students Participating in the Monitoring the Future Study

FROM: The Staff of the Monitoring the Future Project, Institute for Social Research,
The University of Michigan

DATE: Spring, 1996

As you are no doubt aware, the University of Michigan will be conducting an important, nationally recognized survey of some of the students in your school. As a teacher of participating students, you probably will be the person to announce the study to your students, and to distribute fliers which describe the study in more detail. We would like to thank you in advance for your help with this research.

Please take a few minutes to familiarize yourself with the nature of the study by reviewing this sheet and the enclosed materials. The four-page brochure describes the design of the study, its research topics. and dissemination of survey results. The blue fliers, intended for distribution to students, provide similar information.

Announcing the Survey

The manner in which you present the survey to your students will have a pronounced effect upon the importance they ascribe to their participation in the project. Therefore, we ask that you follow the procedures described below as closely as possible.

Several days before the questionnaire is scheduled to be administered, we would like you to (1) distribute the blue fliers to each student enrolled in your participating classes, (2) post the four-page brochure, and (3) make an announcement which includes the following information:

- The University of Michigan is conducting a nationwide survey of 8th, 10th and 12th grade students. Students in this school are being asked to take part in that survey. In some schools all students in one of these grades are asked to participate. In larger schools only a sample of the students are included.
- The questionnaires used in the survey are not tests. There are no right or wrong answers; the questionnaires simply ask about the feelings, opinions, and experiences of young people.

(over)

- The purpose of the survey is to learn how young people feel about a number of important issues—topics like education, work, leisure, the environment, drugs, and government policies.

- The flier provides some information about the study. Those who would like more information may look over the four-page brochure.

- The administration will take place at ________________________________
  in ____

Reminding Students of the Survey

On the day of the survey administration, ______________________________, we ask that you remind your participating students that they should report to ______________ at ______________________________ for the administration.

Questionnaire Administration

The actual administration of the questionnaire will be done by trained members of The University of Michigan's interviewing staff. In most cases these are people who live in your area and are regularly employed by the University to conduct nationwide surveys. This means that teachers will not be burdened with any administrative responsibilities.

Thank you again for your help. We know it will influence the quality of your students' responses.

How Are the Results Used?

We believe that a study like this is successful only if it makes a difference in the way things get done. Each year, we provide the results to those who are in a position to change things. There is also an annual report to the nation as a whole which is covered by television, radio, and the press; and there are special reports to many interested groups.

Educators want to know what students say about school and their feelings about further education. National leaders will be hearing students' thoughts on government and how it's run. Community and business leaders will also be listening to what students have to say about their hopes for the future.

Will Anyone I Know See My Answers?

No. Your individual answers are never seen by anyone in your school, or anyone else who knows you. We even have a special Grant of Confidentiality from the U.S. Government which protects all information gathered in the study.

Who Is Doing This Study?

The University of Michigan's Survey Research Center is one of the world's largest and most respected social research organizations. It has been conducting nationwide surveys for nearly 50 years.

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monitoring the future

a continuing study of American youth

A number of students
in your school will be
asked to participate
in an important
nationwide survey.

This flier tells you
about the study,
and answers
some questions
you may have.

Survey Research Center
The University of Michigan

APPENDIX O: Student Flyer

Why My School?

In order to represent all students throughout the United States accurately, about 140 schools have been selected by scientific sampling methods at each of three grade levels - 8th, 10th, and 12th grades. Your school happens to be one of those chosen.

Do I Have a Choice?

You certainly do! Your participation in this study is completely voluntary. After you read more about the study on the next pages, we think that you will agree that it is important and exciting, and that you will want to be a part of it.

Why Should I Participate?

A lot of people think they know what young people are all about, but their impressions may be based on only a few young people they know or on newspaper headlines. More of you need to be heard.

Members of your generation have a lot to tell the rest of the country about the things you value, the problems that concern you, and some of the ways you would like to see things changed.

Besides, students say the questionnaire is interesting and they enjoy filling it out.

Why That Name For the Study?

We call it Monitoring the Future because we know that studying the way young people are today will tell us a lot about the way the whole nation will be tomorrow.

What's the Study About?

Our questions will cover a wide range of issues - such as education, work, leisure, future plans, ecology, drugs, and government policies. In all of these areas it is important to know young peoples' feelings about how things are – and how things ought to be in the future. In a sense, your answers will count as a kind of vote on many of these issues.

The 'votes' of all of the participants in the study, taken together, will be a very accurate indication of how all American young people feel. Next year and in the following years other students will also be asked for their ideas on these subjects, so that we can find out how much things change from one year to the next.

BEST COPY AVAILABLE

APPENDIX P: Implicit Parental Consent Form

Dear Parent/Guardian:

Main Senior High School has been selected by the University of Michigan to participate in a survey of 10th graders, entitled Monitoring the Future: A Continuing Study of American Youth. This survey is part of an annual, nationwide study of American young people which has been going on for over twenty years.

The 10th graders at Main Senior High School will be asked to complete a 45-minute questionnaire. The questions ask about school experiences, attitudes toward school and education, plans for the future, use of and attitudes about using alcohol and drugs, work experiences and preferences, health and leisure activities. There are no questions about sexual behavior or abortion. Since you have a son/daughter who is a 10th grader, I am asking your permission in advance to have him/her participate in the survey.

I can assure you that neither the school nor individual students will be identified in any report from the study. Results will be confidential, and the Main Senior High School staff will not be involved in the data collection. Reports on the national results will be provided to the school for each of the next three years.

We believe this study is a worthwhile undertaking and merits your consideration. If for any reason you do not wish your son/daughter to participate in this study, please ask your son/daughter to return the attached slip to ____________________ within two days.

Thank you in advance for your consideration.

Sincerely,

Mr. John Jones, Principal

✂ --

IF YOU DO NOT WISH YOUR SON OR DAUGHTER TO PARTICIPATE IN THIS STUDY, PLEASE ASK HIM/HER TO RETURN THIS SLIP TO ________________________ WITHIN TWO DAYS.

Student's Name ____

I prefer that my son/daughter not participate in this study.

____________ (Date)

______________________________ Parent or Guardian signature

APPENDIX Q: Explicit Parental Consent Form

Dear Parent:

Main Senior High School has been selected by the University of Michigan to participate in a survey of 10th graders, entitled Monitoring the Future: A Continuing Study of American Youth. This survey is part of an annual, nationwide study of American young people which has been going on for over twenty years.

The 10th graders at Main Senior High School will be asked to complete a 45-minute questionnaire. The questions ask about school experiences, attitudes toward school and education, plans for the future, use of and attitudes about using alcohol and drugs, work experiences and preferences, health and leisure activities. There are no questions about sexual behavior or abortion. Since you have a son/daughter who is a 10th grader, I am asking your permission in advance to have him/her participate in the survey.

I can assure you that neither the school nor individual students will be identified in any report from the study. Results will be confidential, and the Main Senior High School staff will not be involved in the data collection. Reports on the national results will be provided to the school for each of the next three years.

We believe this study is a worthwhile undertaking and merits your consideration. If you will allow your son/daughter to participate in this study, please ask your son/daughter to return the attached slip to ______________________ within two days.

Thank you in advance for your consideration.

Sincerely,

Mr. John Jones, Principal

✂ -

PLEASE ASK YOUR SON/DAUGHTER TO RETURN THIS SLIP TO ___________________________
WITHIN TWO DAYS.

Student's name ____

I give my son/daughter permission to participate in this study.

_____________ (date)

_________________________________ parent or guardian signature